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ABSTRACT

This kindergarten level environmental education guide is one of a series of guides, K-12, which were developed by teachers to help introduce environmental education into the total curriculum. The guides are supplementary in design; it is the teacher's decision when the concepts, objectives, activities, and resources may best be integrated into the existing classroom curriculum. This guide contains a series of 12 episodes (minilesson plans), each having a number of suggested in- and out-of-class learning activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Although the same concepts are used throughout the K-12 program, emphasis is placed on different aspects of each concept at different grade levels. The kindergarten guide focuses on aspects such as weather, temperature, population, water pollution, transportation, the seasons, litter, and a conservation of resources. Each of the 12 concepts is covered in one of the 12 episodes contained in the guide. Further, each episode offers subject area integration, subject area activities, interdisciplinary activities, cognitive and affective behavioral objectives, and suggested references and resource materials useful to teachers and students. (Author/TK)

SE 018 343

ENVIRONMENTAL EDUCATION GUIDE

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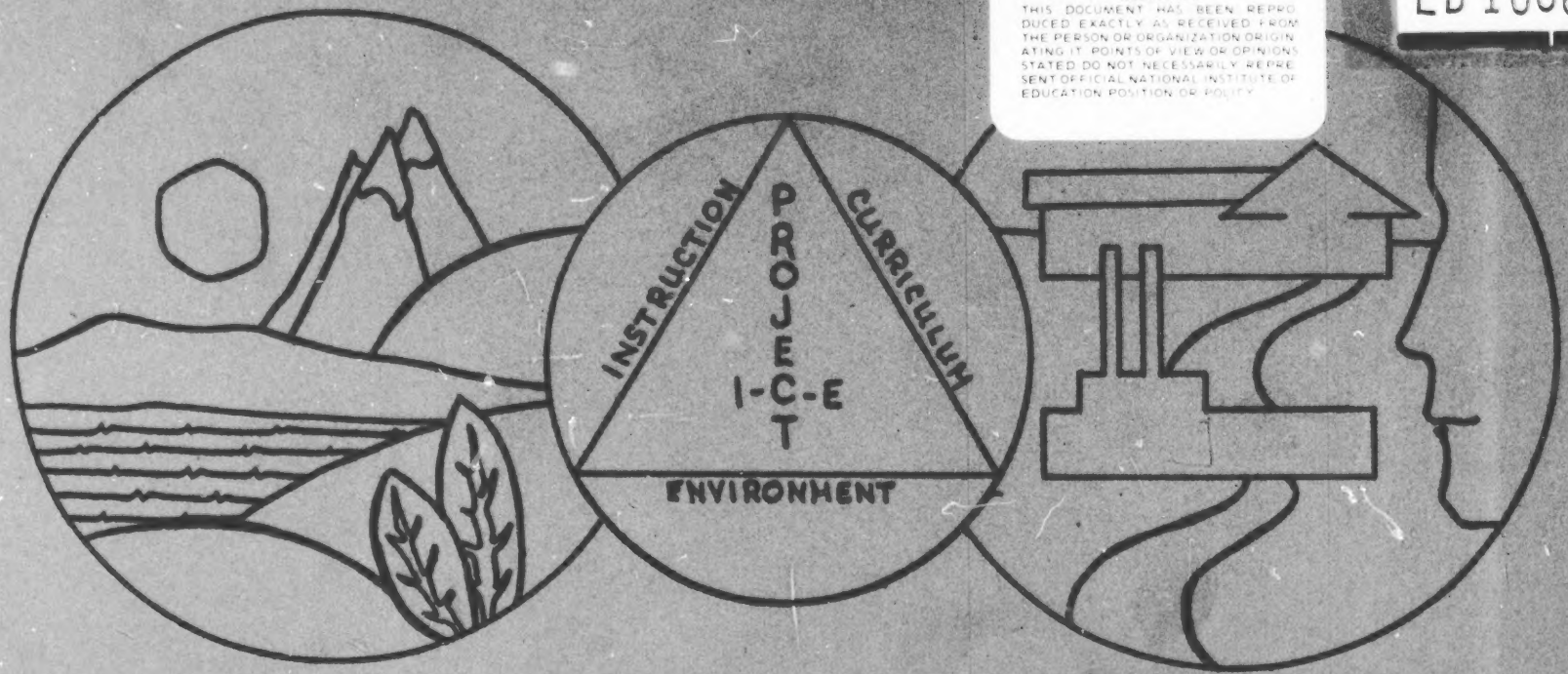

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KINDERGARTEN

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FORWARD TO PROJECT I-C-E ENVIRONMENTAL EDUCATION GUIDES

In 1969, the First Environmental Quality Education Act was proposed in the United States Congress. At the time of the introduction of that legislation, I stated:

"There is a dire need to improve the understanding by Americans of the ominous deterioration of the Nation's environment and the increasing threat of irreversible ecological catastrophe. We must all become stewards for the preservation of life on our resource-deficient planet."

In the three years since the Environmental Education Act was passed by the Congress, much has happened in the United States to reinforce the great need for effective environmental education for the Nation's young people. The intensive concern over adequate energy resources, the continuing degradation of our air and water, and the discussion over the economic costs of the war against pollution have all brought the question of the environmental quality of this nation to a concern not merely of aesthetics but of the survival of the human race.

The intense interest by the public in the quality of our lives as affected by the environment clearly indicates that we cannot just use incentives and prescriptions to industry and other sources of pollution. That is necessary, but not sufficient." The race between education and catastrophe can be won by education if we marshall our resources in a systematic manner and squarely confront the long-term approach to saving our environment through the process of education.

As the incessant conqueror of nature, we must reexamine our place and role. Our world is no longer an endless frontier. We constantly are feeling the backlash from many of our ill-conceived efforts to achieve progress.

Rachel Carson's theme of "reverence for life" is becoming less mystical and of more substance as our eyes are opened to much of the havoc we have wrought under the guise of progress. A strong commitment to an all-embracing program of environmental education will help us to find that new working definition of progress that is a pre-requisite to the continued presence of life on this planet.

- Senator Gaylord Nelson

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KINDERGARTEN PREFACE

This booklet was revised to help kindergarten teachers introduce Environmental Education more easily into the curriculum.

These units are not extra work to be taught separately, but are designed to fit in as a supplement or addition to units already being used.

Ecology is in - Get with it

DIRECTIONS FOR USING THIS GUIDE

This guide contains a series of episodes (mini-lesson plans), each containing a number of suggested in and out of class learning activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Further, each episode offers subject area integration, multi-disciplinary activities, where applicable, both cognitive and affective behavioral objectives and suggested reference and resource materials useful to the teacher and students.

1. This I-C-E guide is supplementary in design--it is not a complete course of study, nor is its arrangement sequential. You can teach environmentally within the context of your course of study or units by integrating the many ideas and activities suggested.

2. The suggested learning activities are departures from regular text or curriculum programs, while providing for skill development.

3. You decide when any concepts, objectives, activities and resources can conveniently be included in your unit.

4. All episodes can be adapted, modified, or expanded thereby providing great flexibility for any teaching situation.

5. While each grade level or subject area has its own topic or unit emphasis, inter-grade coordination or subject area articulation to avoid duplication and overlap is highly recommended for any school or district seeking effective implementation.

This total K-12 environmental education series is the product of 235 classroom teachers from Northeastern Wisconsin. They created, used, revised and edited these guides over a period of four years. To this first step in the 1,000 mile journey of human survival, we invite you to take the second step--by using this guide and by adding your own inspirations along the way.

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PROJECT I-C-E TWELVE MAJOR ENVIRONMENTAL CONCEPTS

1. The sun is the basic source of energy on earth. Transformation of sun energy to other energy forms (often begun by plant photosynthesis) provides food, fuel and power for life systems and machines.

2. All living organisms interact among themselves and their environment, forming an intricate unit called an ecosystem.

3. Environmental factors are limiting on the numbers of organisms living within their influence. Thus, each ecosystem has a carrying capacity.

4. An adequate supply of clean water is essential to life.

5. An adequate supply of clean air is essential for life.

6. The distribution of natural resources and the interaction of physical environmental factors greatly affect the quality of life.

7. Factors such as facilitating transportation, economic conditions, population growth and increased leisure time influence changes in land use and population densities.

8. Cultural, economic, social, and political factors determine man's values and attitudes toward his environment.

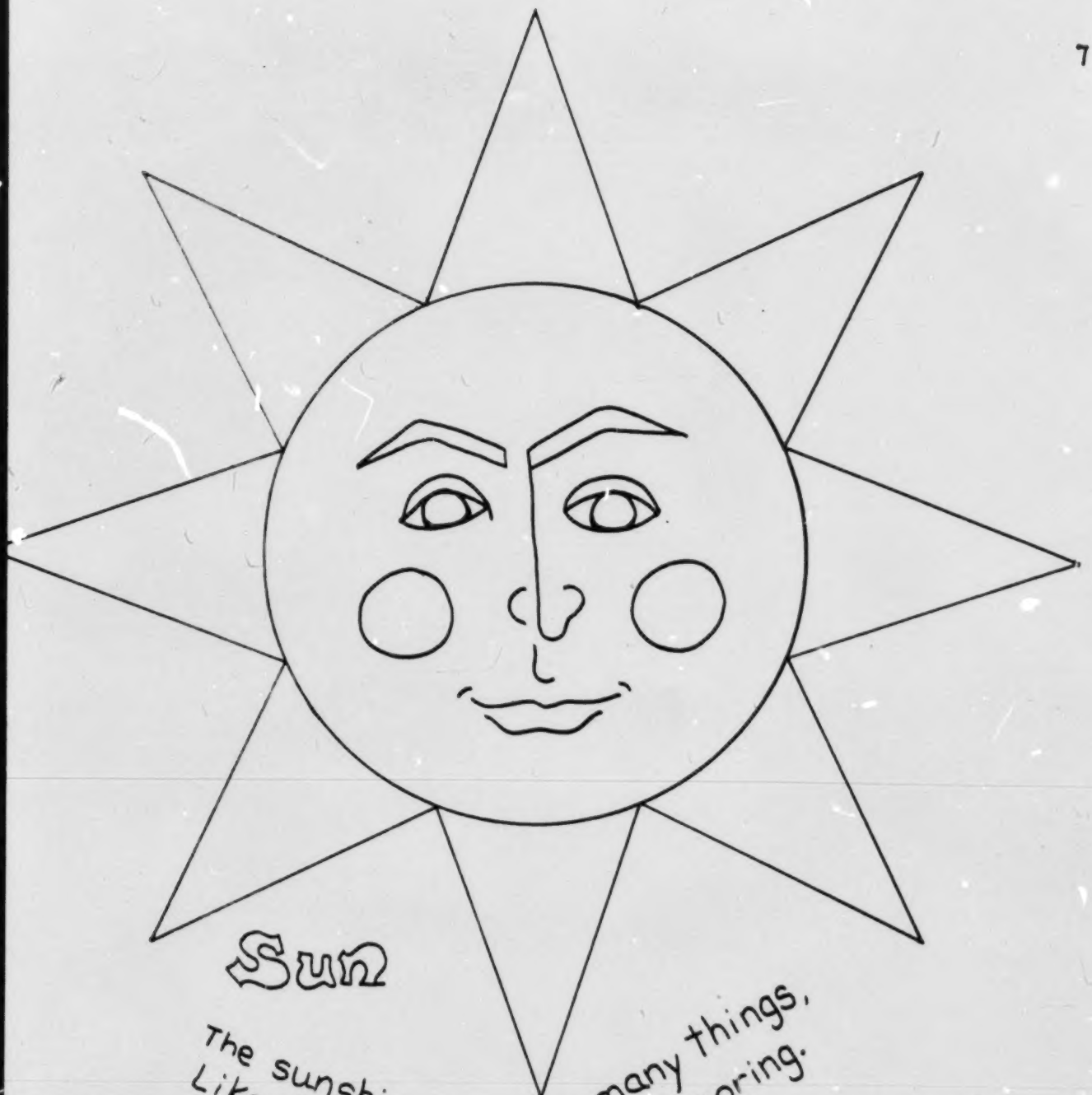
9. Man has the ability to manage, manipulate and change his environment.

10. Short-term economic gains may produce long-term environmental losses.

11. Individual acts, duplicated or compounded, produce significant environmental alterations over time.

12. Each person must exercise stewardship of the earth for the benefit of mankind.

A "Concept Rationale" booklet and a slide/tape program "Man Needs His Environment" are available from the I-C-E RMC to more fully explain these concepts.



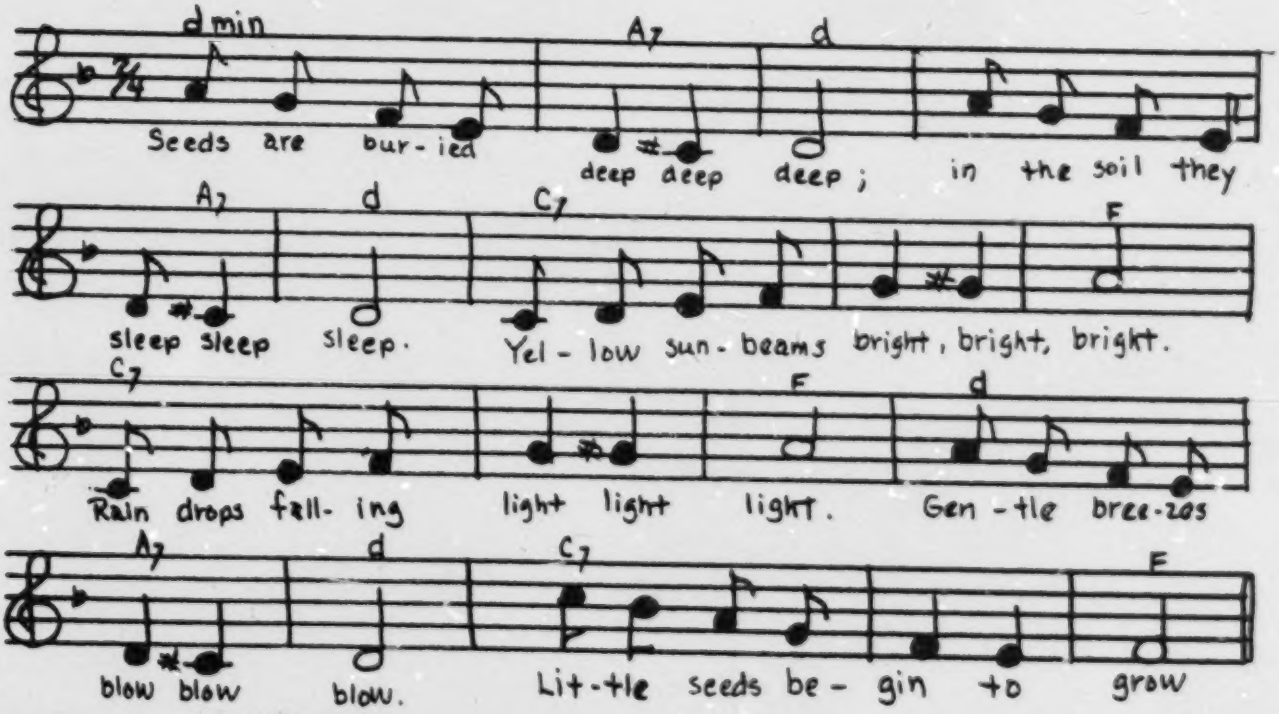
Sun

The sunshine does so many things,
Like changing winter into spring.
He makes days long
and all things grow,
So that is why
we love him so.

Art -

2 yellow circles - same size (8" x 8")
leave one whole, second one divide into eight ⊛ cut, and paste pieces on edge.

Little Seeds

Taken from
Singing Fun by Lucille Wood
and Louise Scott
Webster Pub. Co., St. Louis

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Environmental: **Integrated with:**

CONCEPT NO. 1 - Energy **SUBJECT** Science

ORIENTATION How important is the sun's energy? **TOPIC/UNIT** Weather and Temperature

BEHAVIORAL OBJECTIVES

Cognitive:
Describe how the sun or lack of the sun affects the visual characteristics of plants.
- a. color
- b. straightness
- c. smoothness of leaves

List the four seasons of the year and describe characteristics of plants that are used in identifying season.

Affective:
Suggest that lack of sunlight may be a cause of a plant having lifeless characteristics such as yellow color, crinkled leaves, etc.

Skills Used:
1. Observing importance of sun to plants through experiments.
2. Planting and observing growth.
3. Keeping records of weather changes.
4. Art Skills: Cutting, Pasting, Painting, Drawing

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Weather calendar: Keep track of the weather for the month. Enumerate days of similar weather. The child will conclude that:
   1. sunny days - warm, nice to play outside
   2. cloudy - cool, not so nice
   3. rainy - not to be outside
   4. some winter days - too cold

B. Place a plant in window. Turn it and observe how its leaves will turn towards the sunlight.

C. Chart - Seeds and Plants They Become.

	Seed	Plant
1.	Tape seeds here	Tape picture from package of seed here
2.		
3.		

D. Plant seed in glass jar. On outside of jar, tape seed samples so child sees seed and plant.

E. Make a bulletin board of Fruits and Vegetables. Indicate part of plant we consume.

F. Bring in a branch in early spring. Put in water. Watch for leaves.

(Continued)

Outside or Community:

A. Go outside on different days to compare temperature changes and watch thermometer.

B. On a sunny day, discuss how sun feels. Discuss how the sun affects people, plants and animal:

C. Song to "Mulberry Bush" - Dramatize planting and caring for flowers.
   1. This is the way the sun comes up
   2. This is the way we rake the garden
   3. This is the way we plant the seed
   4. This is the way we water the seed
   5. This is the way we hoe the weeds
   6. This is the way the rain comes down.
   7. Now smell the flowers' sweet perfume. . .

D. Flowers - Creative Dramatics.
Each child pretends to be a seed, kneeling with head covered with hands.
One pupil is chosen to water seeds.
One pupil is the sun.
As seeds begin to grow, left arm is extended, then right arm, head comes up, finally he is straight.
Pupil moves from side to side, gently in a blowing wind.

SUGGESTED RESOURCES

Publications:

Books

Science for Work and Play, Herman & Nina Schneider

Concepts in Science, Brandwein, Cooper, Blackwood, & Hone

The Sun, Our Nearest Star, by Franklyn M. Branley, Crowell Co., 1961

Compton's Precyclopedia, F. E. Compton Co., Chicago

The Sun and the Wind, Fable

(Continued)

Audio-Visual:

Film - Food from the Sun, color, 10 min. (EBF) BAVI 6/42 $4.75

Film - Planting our Garden, color, 11 min., Coronet, BAVI 0515 $4.00

Filmstrips

Sun Up (Weston Woods Story Films)

The Sun's Family

Susan and Peter Dress to Match the Weather

Air Around Us 435-7 SVE $5.50

(Continued next page)

Community:

Have a farmer tell children how
(a) he gets his soil ready to plant his crops.
(b) what is needed to raise good crops.

The farmer could come to school, or the class could visit the farm.

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

G. Bulletin board display. Sun in center. Children place picture objects around that depend on the sun. Label.
H. Trees. Observe tree when it is still summer. Choose one tree to watch all year. Draw and color the tree.
I. Observe same tree in the fall. Make a fall tree with colored leaves.
J. Observe same tree in the winter. Paint a winter tree.
K. Observe same tree in the spring. Make a spring tree.
L. Summary (All seasons)
   a. Bring out samples of the drawings of the trees in season. Discuss and compare the characteristics.
   b. Do a flashlight experiment to show the sun on the trees. Hold the flashlight waist high and shine directly on chalkboard. This shows the direct rays of the sun concentrated on one area. Then slant the flashlight showing the same amount of light spread over a larger area. - - Talk about the heat from the sun making the trees grow faster. When the sun is directly overhead it has more heat.

PUBLICATIONS (Continued)

The Sun Book

AUDIO-VISUAL (Continued)

Filmstrips

Our Wonderful Woodlands ICE RMC St 7

True Book Natural Science Trees 435 SVE

Picture Study Prints SVE
In the Spring - SP137 $8.00
In the Summer - SP138 $8.00
In the Fall - SP139 $8.00
In the Winter - SP140 $8.00

Filmstrips SVE

True Book of Physical Science

(Continued on next page)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	AUDIO VISUAL (Continued) Seasons 435-12 $5.50 Learning About the Seasons F 445 $22.50 Set The Seasons 835 $20.00 Set Season's Adventures 444 $20.00 Set Basic Primary Science - Group 1 "Finding Out About the Sky" 424-6 $5.50 Science for Beginners "The Sky Above Our Earth" 425-3 $5.50
Audio–Visual:	
Community:	

The world is so full of a number
of things, I'm sure
we should all be
as happy as
kings.

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Environmental:

Integrated with:

CONCEPT NO. 2 - Living Organism - Ecosystem

SUBJECT Science

ORIENTATION What is the Difference Between Living and Non-living Things?

TOPIC/UNIT Living and Non-living Things.

BEHAVIORAL OBJECTIVES

Cognitive:

Child will identify living and non-living things.

Affective:

The child will know that non-living things need living things to care for them.

Skills Used:

Observation
Classification

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Make a picture of any living thing: Dog, tree, child, squirrel, etc.
B. Make a picture of any non-living thing.
C. Use pictures of living and non-living things. The child will conclude that living things move by themselves; and that non-living things need some force to make them move.
D. To show that living things grow and non-living things do not grow, read Seeds and More Seeds to the class. Discuss.
E. Poem:
Taking a walk was so much fun
We didn't hurry, we didn't run.
We watched for birds and watched for bees,
We looked at all the pretty budding trees.

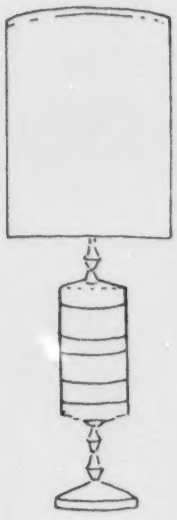
Outside or Community:

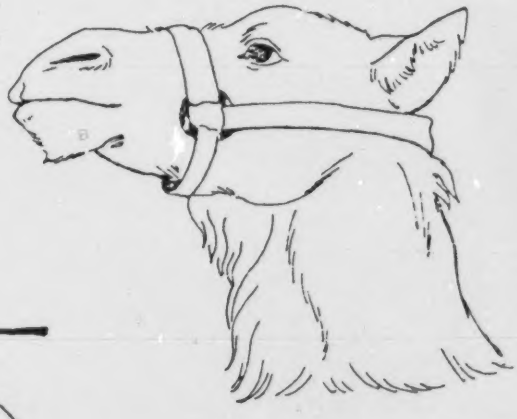
A. Take the class on a "living things walk". Ask them to point out things that are alive. Talk about things in nature that are not alive. Are rocks living things? Are lakes living things? Are mountains living things?
B. Find a rock while walking and turn it over very carefully.
1. What lives under this rock? Look very carefully to make sure you see everything.
2. Check other rocks nearby.

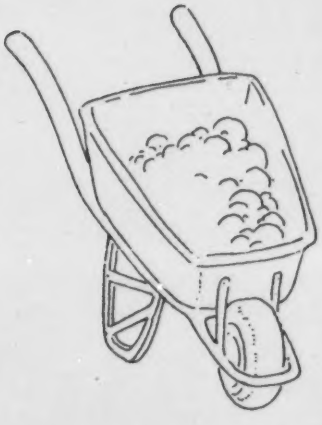
16/17

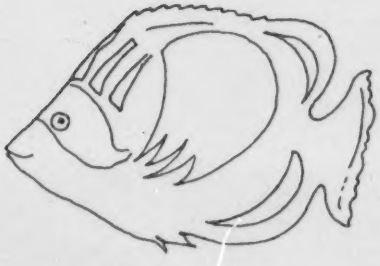
SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: 1. Seeds and More Seeds, Millicent E. Selsam - Harper and Row 2. Soon After September: The Story of Living Things McGraw-Hill Co., N.Y. Study Prints Kit 37 ICE-RMC The Variety of Living Things 3. Ecolab - C 1971 Learning Concepts Benefic Press **Audio-Visual:** Care of Pets (2nd Ed.) Color - 13 min. (EBF) BAVI 0344 $5.50 Film 330 A Slice of Bread ICE RMC 16 min. Filmstrip - How Animals are Alike FS St 5 ICE RMC Filmstrip - What Animals Need FS St 5 ICE RMC Slides Ecology (10 slides, script) FS St 14 (continued) **Community:** Nature Trail - Identify living and non-living things seen on the trip. Walk around school yard.	AUDIO-VISUAL (Continued) (Grade level above kindergarten, but with teacher adaption could be used. Slides are good.)

Find the living things









E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 2 - Ecosystem

SUBJECT Science

ORIENTATION What do we need to make a terrarium?

TOPIC/UNIT Making a terrarium

BEHAVIORAL OBJECTIVES

Cognitive:
Describe a terrarium as a miniature world in a container.

Affective:
Demonstrate awareness of the necessity for a correct balance of material used in order to produce an effective terrarium by suggesting "an incorrect balance" as being the cause of dying plants in the terrarium.

Skills Used:
Observation - growth of plants, "rain" in terrarium.
Increased vocabulary.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. A small aquarium tank or a wide-mouth gallon jar can be placed in the "Show and Tell" area. When children begin to ask "what is it and what can we do with it?" the teacher can suggest: Let's begin building a little world in this container.
   1. What kind of world?
      a. It can be plant or animal. Suggest plant because plants are easily gathered.
   2. What do you think we will need?
      a. Earth, plants and perhaps small animals.
   3. Where will we find these things?
      a. In woods and fields
   4. What will make the best terrarium?
      a. Gravel or sand
      b. Charcoal
      c. Wood soil containing humus.
      d. Small plant and tree seedlings - be sure to include soil to protect roots, masses and lichens. (Keep these in plastic bags until ready for use.) Can count

(continued)

Outside or Community:

A. Have someone from Science Dept. come and talk with children about plants and animals.
B. Visit a greenhouse and compare it with our terrarium.
   1. Greenhouse is almost completely glass. Why?
C. Go on a field trip to Outdoor Educational Center if one is available and examine soil, look for moss, lichens, ferns, etc. animal homes, water insects.
   1. Bring back some moss and try to keep it green in a saucer.
D. Make a mural of the outdoor lab field trip.
E. Could make booklet of pictures children draw.
F. Material printed for grades 3-6, but could be used for teacher information on the ecosystem and possible field experiences. Send for NATURE'S RECYCLING SYSTEM - II from ICE - RMC.

SUGGESTED RESOURCES

Publications:

Magazines: Ranger Rick's Magazine, National Wildlife

Childcraft Books:
Klein, Leonore, What Is An Inch, Harvey House, Inc.
Environmental Education Exercises 130 Gr ICE-RMC
Lionni, Leo, Inch by Inch, Astor-Honor, Inc.

Teacher Resource - Terrariums and Miniature Gardens $1.95, Lane Books, Menlo Park, Cal.

Audio-Visual:

Filmstrips - "We Explore the Field and Meadow" Coronet Instructional Films

Study Prints - Kinds of Animals
Animal Babies ICE RMC Kit 19

Film 33D - A Slice of Bread ICE-RMC
16 min., color. Shows the interdependence of all living things.

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

d. number of plants gathered.
e. A small saucer of water.
f. An interesting rock or two.
g. A pane of glass to cover terrarium after it has been assembled

5. What shall we put in the container first?
   a. Measure one or two inches of gravel or sand - excess water will be stored here.
   b. Again measureamount of charcoal. This keeps soil sweet. Is it like charcoal we use to barbecue? It is full of holes.
   c. Soil from woods - again measure.
   d. Plants - do not crowd - measure size of plants and distance betweem as they are placed in terrarium. Put popsicle sticks beside plants to measure growth.
   e. Put a small dish to hold water in soil. Put water in dish - measure it - sprinkle plants with water. Add rocks.
   f. Cover and place away from direct sunlight and observe growth.

B. Go outside. Bug's eye view.
Everyone stretches out, eyes on grass level, to see what the world is like to a bug. The blade of grass is like a tree! The pebble is mountain size to a bug. Big things like trees just don't show. People are just feet.

Taken from:
Learning about Nature Through Games
By: V. Musselman

E. S. E. A. Title III – PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 3 - Environment: Carrying Capacity

SUBJECT Social Studies

ORIENTATION How Are We Affected by Crowded Conditions?

TOPIC/UNIT Population

BEHAVIORAL OBJECTIVES

Cognitive:

Explain how the size of an area limits fun and activities.

Affective:

Demonstrate awareness of crowded conditions by identifying such areas in the playground area or neighborhood.

Skills Used:

1. Oral skills
2. Observation
3. Making judgments
4. Giving reasons for conditions and feelings

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

I. Social Studies
A. Blocks in a container. Demonstrate that placing blocks in a box is limited. Keep putting in blocks until container will hold no more. Discussion and making oral judgments as to its holding only a certain number.
B. Mark off a small area and crowd with children till filled. Then, taking the number of children in the small area, take them outdoors and let on playground area.
1. Follow with questions:
a. How did you feel?
b. What could you do and not do in each space?
c. What would happen if too many people tried to live in one area? Would there be enough food, water?
C. Talk about places you've been where there was a crowd. List places where there would be a crowd.
D. Splash Paint (Art)
1. Splash some paint on a sheet of paper.
2. Draw a person's head for each dot of paint. If spatters or dots are relatively close together, a crowd is created. (cont'd.)

Outside or Community:

I. Social Studies
A. Take a trip around neighborhood or to a neighboring city. Notice crowded conditions in some areas. Refer to "Neighborhood Walk".

SUGGESTED RESOURCES

Publications:

Rabbit Hill by Robert Lawson

Audio–Visual:

Film - Rabbit Hill, color, 2 reels
53 min., Brown County Library

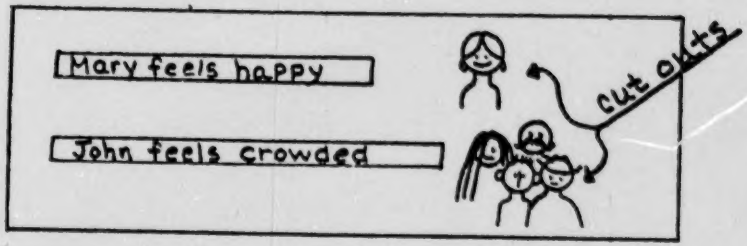
Boomsville - ICE - Film 400 - Shows population growth RMC

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

E. Crayon drawing of a spectator sport crowd, or make a bulletin board showing a crowd by having each child draw and cut a head and neck



F. Ask each child to tell how he feels in a crowd. Write it on a sentence strip and put on bulletin board showing a crowd.

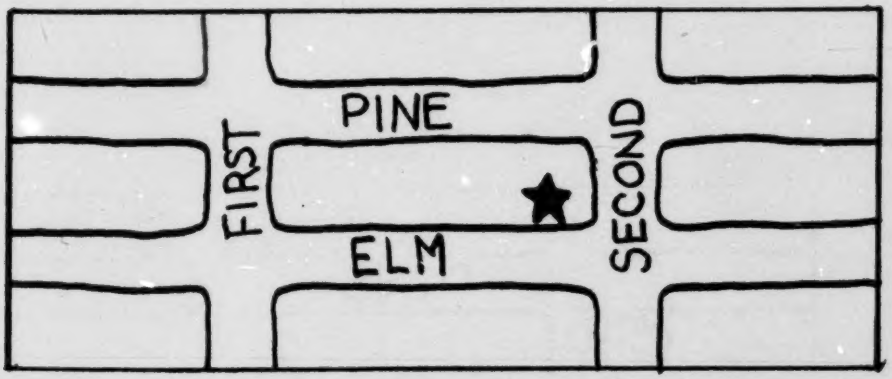
G. You will need two large tables or other space i.e. floor. Discuss space and what can happen in open spaces.

1. Ask the students to bring small cars or dolls or make paper ones. Mark off the table spaces into areas with masking tape. One car or one doll will go into each.
2. Have students place car into each space one by one. As cars are put in, discuss what happens to the space and the kinds of things that can be done in the space.
3. Discuss how they see this process happening in their neighborhood.

MAPPING YOUR NEIGHBORHOOD

You are going to draw a picture, or make a map, of your neighborhood. You will have to "follow orders" carefully. Be sure not to leave anything out.

1. Look at this map showing a school and the streets around it. It could be a map of anyone's neighborhood.



2. Next, go outside and look around your school.
   a) Notice the names of the streets.
   b) Look at the other buildings.

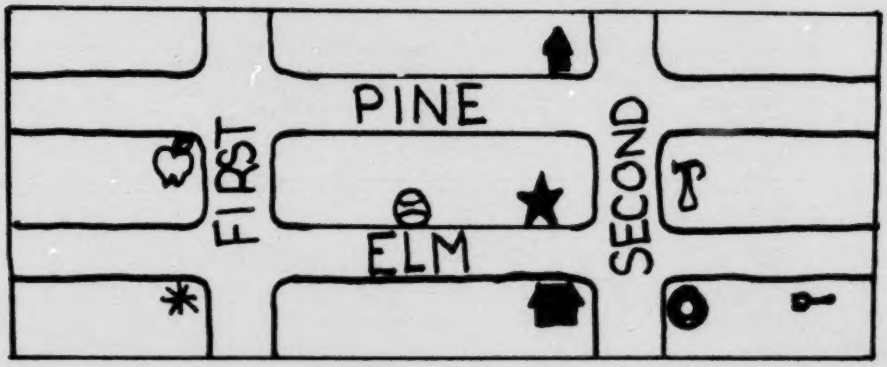
3. How many buildings on the list below do you see?

CHECK HERE	BUILDING	SYMBOL
_____	School	
_____	Apartment House . . .	
_____	Office Building . . .	
_____	Store	
_____	Garage	
_____	House	
_____	Playground Building .	
_____	Factory	
_____	Service Station . . .	

Add anything that is not on the list.

4. When you are back in your classroom, draw your own map of the land around your school.
   a) Write in the street names where they belong.
   b) Put in the symbol for your school.
   c) Put in the other symbols.

Your map might look something like this:



Taken from:

A Place to Live
Published by:
National Audubon Society

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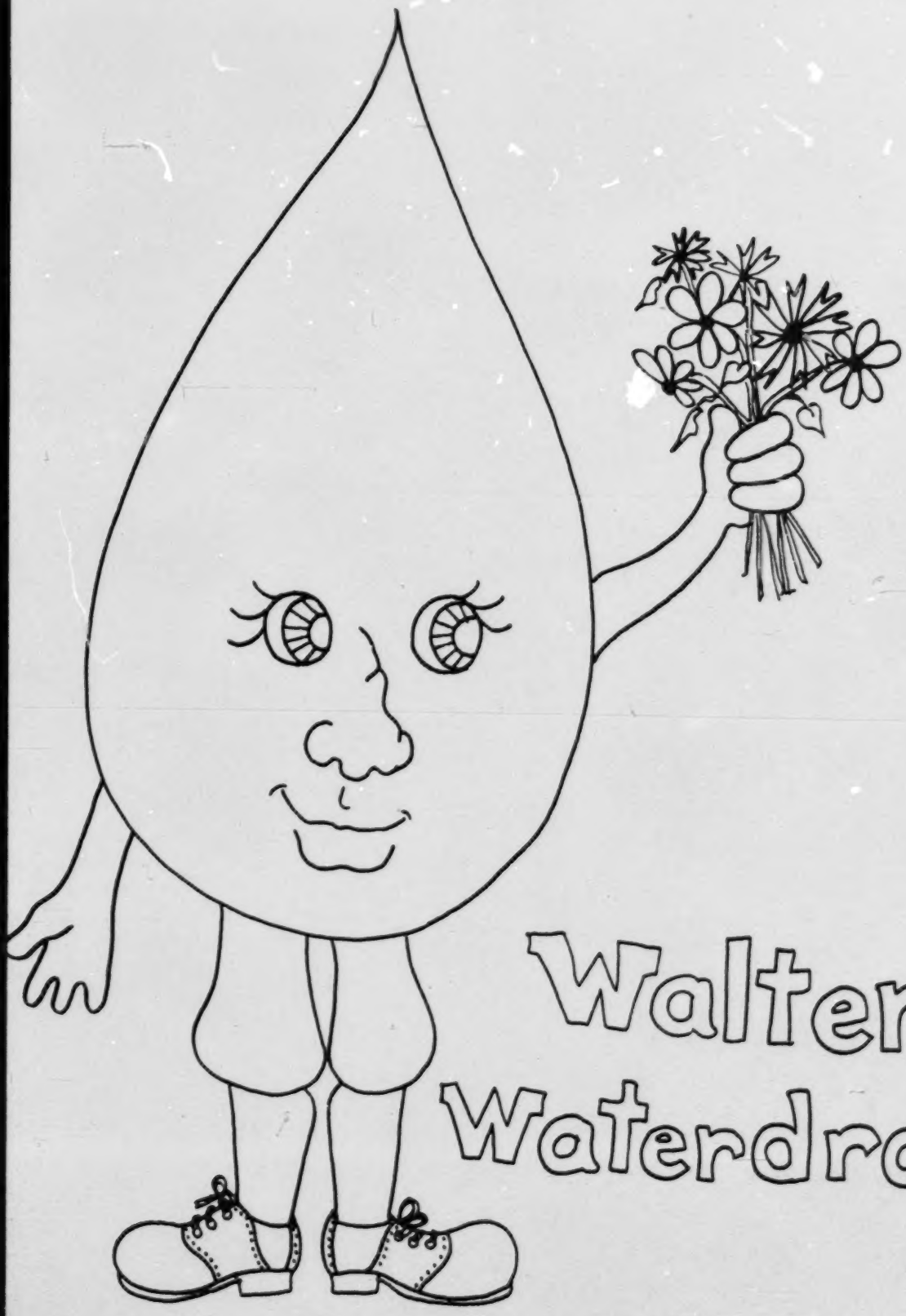

Walter Waterdrop

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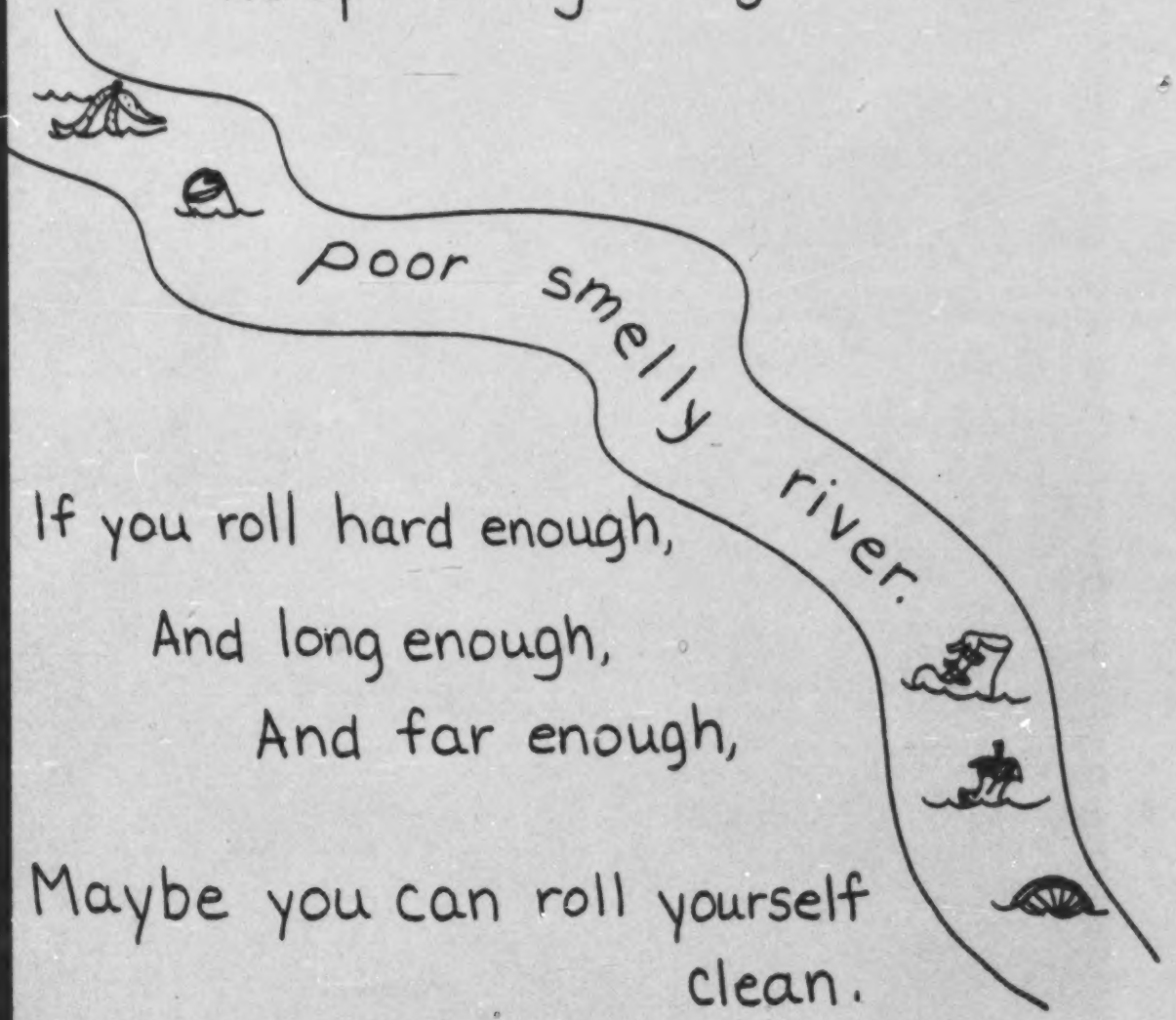
Roll, River, Roll

Keep rolling along,



If you roll hard enough,

And long enough,

And far enough,

Maybe you can roll yourself clean.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 4 - Pure Water

SUBJECT Social Studies, Phy. Ed.

ORIENTATION How do we use water?

TOPIC/UNIT Water Pollution

BEHAVIORAL OBJECTIVES

Cognitive:

Point out bodies of water on globes and maps using the map symbols.

Use the word desert to describe a dry land area.

Tell ways that water is used by:
a) this family
b) companies
c) farmers

Affective:

Demonstrate awareness of water usage by identifying new ways of using water while on a trip, etc., and bring this information to class.

Skills Used:

1. Locating water and land on maps and globes.
2. Listing what could not be done if there was no water

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

I. Social Studies
   A. Ask - Does the earth have water on it?
      Show a globe.
      Show maps. Teach the children how to recognize bodies of water.
      1. Talk about the fact that sometimes more rain falls in certain places than in others.
      2. Show pictures of the many places in the world where water is found.
      3. Show pictures of where there isn't water (deserts, tundras)

   B. Make bulletin board of above pictures.

   C. Children will talk about:
      1. Why he needs water -
      2. Different ways he uses water.

   D. Make a class list of things that would be impossible if there was no water.

   E. A clever poem Little Johnny Raindrop is included in the

(Continued)

Outside or Community:

Write to:
Environmental Protection Agency
Office of Public Affairs
1 North Wacker Drive
Chicago, Illinois 60606

Ask for free booklet:
Needed: Clean Water
Problems of Pollution
(You may be able to get enough for the whole class)

Write to:

U. S. Environmental Protection Agency
Region VII
Kansas City, Missouri
Ask for coloring book:
The Adventures of Walter Waterdrop (water uses & pollution)
(You may be able to get enough for the whole class)

Write to:
IEE Offices
Nova High School, 3600 S. W. College Avenue, Fort Lauderdale, Florida 33314

Ask for -
Little Johnny Raindrop - a poem of the water cycle.

(continued)

SUGGESTED RESOURCES

Publications:

Book of Activities for the Teacher
Running Water ICE-RMC 120 Ma 5

A Teacher's Guide to the study of water for primary youngsters. ICE-RMC

Fish is Fish, Leo Lionni
Pantheon

Audio-Visual:

Pictures of where water is found and where water is not found.

Filmstrip - True Book Physical Science
Deserts 435-8 $5.50 SVE
Oceans 435-10 $5.50 SVE

Study Prints - Kit 38 Desert Pictures
ICE-RMC

Film - Your Friend the Water - Clean and Dirty #3174 BAVI $2.25

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

E. teacher's guide for Water available from ICE - See suggested resources.

COMMUNITY (Continued)

The ABC's of Water - a booklet with all the letters of the alphabet asking if there is water in it.

II. Physical Education
A. Game: It's Raining
1. Form double circle. Players facing each other. Teacher calls "Go out to Play". Players on outside skip or run around circle. When teacher calls "It's Raining", all players run back to their partner, join hands and sit down. Last couple to sit down is out of the game. Change position of skippers with partners after short intervals.

Audio-Visual (Continued)

Film - Water, Water Everywhere BAVI $2.25

Films - Free
320 The Stream, order from ICE-RMC
It's Your Decision - Clean Water, Order from:
Modern Talking Picture Service, Inc.
160 East Grand Avenue, Chicago, Illinois 60611

BEST COPY AVAILABLE

Who Likes Rain?

"I" said the duck, "I call it fun.
For I have my little red rubbers on.
They make a cunning, three-toed track,
In the soft cool mud; quack, quack."

"I" cried the dandelion, "I"
My roots are thirsty, my buds are dry."
And she lifted her little yellow head
Out of her green and grassy bed.

"I hope 'twill pour; I hope 'twill pour,"
Croaked the tree frog from his gray
bark door.
For with a broad leaf for a roof,
I'm always safely waterproof.

Sang the brook, "I welcome every drop,
Come down dear rain drops, never stop.
Until a broad river you make of me,
And then I will carry you out to the sea."

Clara Doty Bates

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 4 - Pure Water **SUBJECT** Science - Art - Phy. Ed.

ORIENTATION How does water become polluted? **TOPIC/UNIT** Water Pollution

BEHAVIORAL OBJECTIVES

Cognitive:

Define pollution.

Tell how water becomes polluted.

Affective:

Demonstrate awareness of pollution by offering examples of water pollution he has seen.

Skills Used:

1. To differentiate differences of land from water on maps and globes.
2. Drawing.
3. Observation.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Experiment with water mixed with the following: soil, oil, etc. What happens when it stands for a while?

B. Point out bodies of water on globes, and on an assortment of maps.

C. Make large mural of magazine pictures or drawn pictures on uses of water.

D. What happens to nice clean rain? Refer to poem - Little Johnny Raindrop.
   1. Students could do a water color painting of a rainy day.
   2. They should continue to paint without changing water in which they rinse their brush.
   3. Water pollution could be associated with the dirty water of the water color container.

E. Introduce word Pollution and explain. Label glass of polluted water.

(continued)

Outside or Community:

A. Tour school building and follow with discussion: kitchen, restroom, sinks, drinking fountains, janitor's room, etc. Places where water is essential.

B. Students should observe a body of water. (creek, river, or pond).

C. Students should discuss pollution of water and try to explain how it got there.

D. Take a trip to a local polluted stream. Look for signs of pollution. (erosion, trash, greasy water). Rain water carrier waste into streams. Discuss how the streams became polluted.

E. Trip to well managed fish pond. Look for beautiful things of clean pond--sunshine on clean water, plants, birds. Have picnic lunch and remind the children that picnic litter can pollute pond.

SUGGESTED RESOURCES

Publications:

Books

The First Book of Water by Joe Noring.
Willy, The Story of Water by Jerome Spar
Rain, Rain, Rivers by Shulruitz
The Magic of Water, New York, Charles Scribner's Sons, Inc.
Good Rain by Gouday
Not Only for Ducks, The Story of Rain, McGraw-Hill Co., N.Y.
McGilligots Pool, Dr. Suess

Audio-Visual:

Filmstrip: Conservation for Beginners The Muddy Raindrops SVE 430-6 $5.50

Film 510 Still Waters ICE-RMC

Filmstrip - Water Pollution 614.7, Brown County Library.

Pictures from ICE-RMC, Ecology, The Pollution Problem Kit 39
Ecology Kit: Can I Drink the Water? 1971 Urban Systems, Inc.

Community: (CONTINUED)

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

1. Develop concept:
   a. Insert clean pipe cleaner into glass of water.
      Insert pipe cleaner into polluted water.
      Observe and compare cleaners.
   b. Smell water, then discuss.
      1. Which kind of water would you like to play or swim in? Why?
      2. What living things live in water?
      3. Can animal life and plants live in this dirty water? Explain that air is needed in water. Grease and trash use up air. Polluted water kills plants and animal life. It is not good for people, plants or animals.

   c. Show pictures of:
      1. Polluted water
      2. Clean water
      3. People fishing in managed farm pond
      4. Water recreation

F. Ask children to think of reasons why people and animals need clean water. Ways to keep streams, lakes clean:

   1. Never throw trash on the streets and highways.
   2. Picnic litter goes in trash cans.
   3. Remind others not to throw garbage in streams.
   4. Talk about what happens to the fish in polluted water. When water becomes polluted the dissolved oxygen is used up faster than the plant life in the water can replace it.

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	CLASSROOM (continued)
	Make fish. Draw, paint or color, and cut, stuff and staple. Hang on strings.
Audio–Visual:	5. Show film - The Stream - Discuss how water becomes polluted. Make a list of polluters. (paper, cans, cars, trucks, planes, factories, homes, garbage, rubbish). 6. View the film Still Waters to see the many animals and plants under water. Discuss importance of water.
	Physical Education Game: Uncle Same Game
	A. Divide the play area by two goals. Children are divided into polluters. One child is selected as Uncle Sam. He stands in the middle. Children call "Uncle Sam, Uncle Sam, may we cross your polluted dam?" Uncle Sam replies, "Yes you may if you are a coke bottle." They get a free run across. Those not mentioned remain on the line until Uncle Sam calls "go". They must cross the opposite end without being caught. If caught he goes to sideline. After 3 turns, Uncle Sam chooses someone who is not caught to take his place. (Boys pick girls and reverse.) When new "it" is chosen, all those caught return to game.
Community:	B. After children have played the game, they may be able to choose more names of polluters.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	AUDIO-VISUAL (Continued) We Explore the Stream - Coronet - Photographs from SCS or local water control company Water - How Water Helps Us, BAVI - F-181-D 11 min. (IMC) Adventures of Junior Rain Drop, BAVI, #0022 10 min. color $2.00 Your Friend the Water-Clean or Dirty, color, 6 min. (EBF) BAVI
Audio–Visual:	
Community:	

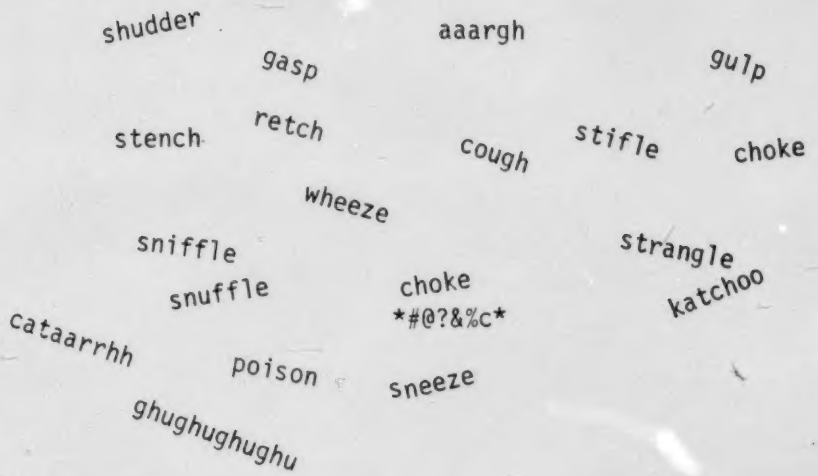
SUPERSTINK

Big bus at the bus stop.

Ready to go again.

Big noise.

Big cloud of



E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 5 - Clean Air **SUBJECT** Science - Phy.. Education

ORIENTATION Why Do We Need Clean Air? **TOPIC/UNIT** Air Pollution

BEHAVIORAL OBJECTIVES

Cognitive:

State that all plants, people and animals need air in some form to stay alive.

List ways that air is polluted.

Identify places.

Affective:

Demonstrate awareness for the need of clean air in the lives of all living things by identifying situations not having clean air and making statements such as "Plants and animals can't grow very well in that air".

Skills Used:

1. Collecting and organizing.
2. Experiment with things in child's immediate world.
3. Drawing pictures.
4. Physical exercises.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

I. Science
   - A. Mural: "We need air."
   - B. Get a vacuum cleaner (with a hose). Tape a facial tissue over the hose. Turn on the vacuum. Switch off after several minutes. What do you see? There are some things in the air.
   - C. Dust the top of a table or piano in morning. Put a book on its top. Check to see difference at end of day, second day, etc.
   - D. Experiment: Child pinches nose and closes mouth while teacher counts to 10. Child tells how he feels without supply of air.
   - E. Child feels his own body for his ribs and notices how chest expands when inhaling; contracts when exhaling.
   - F. The teacher will read names of odors. Children will hold up hand for pleasant odors and hold their noses shut for unpleasant odors.
   - G. Teacher draws (cross-section) of child in close air-tight appliance. Air inside designated by circulating ar-

(Continued)

Outside or Community:

A. Take an "air walk". Ask the class to point out things that need air to stay alive. Make a mural under here.

B. Safety pamphlet from police department or a newspaper article relating death or danger of playing with or in a discarded refrigerator, freezer, etc.

C. Write to:
Environmental Protection Agency
Office of Public Affairs
1 North Wacker Drive
Chicago, Illinois 60606
Ask for free booklet:
Needed: Clean Air - The Facts About Air Pollution

D. Sources of air pollution:
Garage
Farm
Paper Mill
Buses

E. Burn something.
How does this affect the air?

F. Sit outside. How many things can you see or think of that pollute the air?

SUGGESTED RESOURCES

Publications:

Audio–Visual:

Film - 6290 Air Around Us, color, 12 min. John Colburn, BAVI $4.00
Filmstrips:
Air Around Us
Ocean of Air We Live In
Popular Science Pub. Company
True Book of Your Body and You
Air Pollution and You
Free - order from:
Modern Talking Picture Service
160 East Grand Avenue
Chicago, Illinois 60611
Film - #0678 Air Pollution BAVI

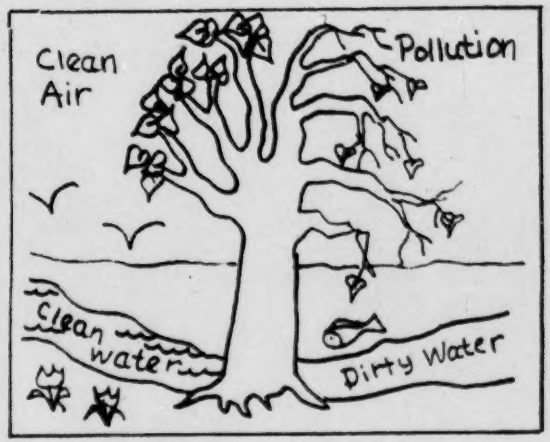
Community:

Tour factor - smokestacks showing Pollution
Nurse or doctor
Physical Education teacher

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

I. Science
G. rows-to child. As supply is exhausted in a limited place, one cannot survive; so all air supply has its limits in various amounts in various areas and must be conserved or wisely used.
Problem focused: Lack of oxygen causes sickness or adverse effects.
H. Make a Pollution Bulletin Board.



II. Physical Education
A. Physical exercises: walking, hopping, skipping, running, galloping, tiptoeing, sliding, etc. Faster exercises use more energy and child breathes oftener.

What Are Some Ways People Are Hurting the Environment?

I. Air Pollution:

A. Stand outside your school. Look all around. Check all of the places you can see that air pollution is coming from:

_____factories
_____apartment houses
_____cars
_____buses
_____airplanes
_____fires

B. Describe the sky. Is it clean? _____yes _____no
Is it hazy? _____yes _____no
Is it darker in some parts than others? _____yes _____no

C. Can you smell the air? _____yes _____no

D. Do your eyes tear or smart? _____yes _____no

If possible, watch a bus leave a bus stop.

Can you see the exhaust? _____yes _____no

Can you smell the exhaust? _____yes _____no

E. Try to collect some pollutants.

1. Wipe a car with a tissue. Paste a piece of the tissue below.

2. Wipe a window ledge with a tissue. Paste a piece of the tissue below.

3. Go to a tree near a bus stop. Wipe a leaf with a tissue. Paste a piece of tissue below.

4. Go to a tree as far away as possible from bus stops and heavy traffic. Wipe a leaf with a tissue. Paste a piece of tissue below.

F. Sandpaper a small section of the stones on the outside of the school building. Is there a difference in color? _____yes _____no

G. If there is snow on the ground, what color is it? _____white _____gray

G. How long ago did the snow fall? _____today _____yesterday
_____a few days ago.

Taken from:
A Place to Live, published by the
National Audubon Society

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 6 - Natural Resources

SUBJECT Art

ORIENTATION What Are Natural Resources?

TOPIC/UNIT Mud Pies

BEHAVIORAL OBJECTIVES

Cognitive:

Name some of the natural resources used in the making of ground.

Compare the main characteristics of the 3 types of soil.
- a. Size of pieces of ground
- b. Grass, etc. included
- c. Color

Affective:

Support the idea that resources can be used for other things than growing plants by finding new uses for resources that do not include growing of plants.

Skills Used:

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

I. Art

A. You will need 3 containers - each filled with a different type of soil (sand, clay, humus).

Work outdoors near a supply of water. Make mud pies out of 3 different types of soil. Then, by mixing types, decide which combination is best for making the best pies. The mud pies could be decorated with pebbles. Spread pies out on newspapers and put them in a sunny, windy place to dry!

1. Follow with discussion:

a. What did we use to make mud pies? (soil, water, rocks).
b. Why did we put them in a sunny, windy place?
c. Name the natural resources that were used to make mud pies.
d. Can you name other natural resources?
e. What other ways can resources be used for fun?

Outside or Community:

*Note -

This activity could be done inside or outside.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

The activities for this unit were taken from:

Environmental Education Exercises
Bourbon County Schools
Environmental Education Dept.
Paris, Kentucky 40361

Things, Dunn, Phoebe, Tris, Doubleday, 1968

Audio–Visual:

"Soil and Life (The)" United World Films, 221 Park Avenue South, New York, New York

Community:

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 6 - Natural Resources **SUBJECT** Science - Physical Education

ORIENTATION What Happens to Plants and Animals When There Is a Forest Fire? **TOPIC/UNIT** Fire Prevention

BEHAVIORAL OBJECTIVES

Cognitive:

Describe some effects of forest fires.

Affective:

Value the need of fire prevention in his life by taking part in a fire drill and following the directions given by the teacher or fireman.

Skills Used:

1. Observation
2. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

I. Science
A. Discuss air. Let children bring out ideas.
1. All around us
2. Feel it in the wind
3. Can't see it

B. What is air used for:
We breathe it. Demonstration - put a lighted candle under a jar, candle goes out. Why? No air.

C. Talk about fires - how are they started? (Air is needed for fires to burn.) Who puts fires out? How do they put fires out?
1. Discuss fire safety. Practice fire drills. Children with help of parents, plan escape routes in homes, report at school.

D. Read - Smokey the Bear Storybook.
1. Show pictures of destruction by forest fires.
2. What happens to the trees and other plants?
3. What happens to the animals?
4. Will all the animals be able to live here now? Why not?

Outside or Community:

A. Visit fire station.
On way to and from fire station, children can look for examples of air pollution and report in classroom.

B. Have a forest ranger speak to the class.
Ask:
1. How fires in the forest are spotted.
2. How is a forest fire put out?
3. Does anyone do anything about the burned-out area?

C. Look for animals and insects around school.
Look in:
- cracks
- holes
- the soil
- under leaves
- the grass
- the air
- the water
- on the sidewalk
- in the mirror

What would happen to these animals and insects if the area was destroyed by fire?

(continued)

SUGGESTED RESOURCES

Publications:

Smokey the Bear Storybook ICE-RMC

Once There Was a Tree! Discovering Nature Series, Phyllis S. Busch, World Publishing
Patterns of Nature, Jeffrey Baker, Doubleday

Kit: Forest Fire Prevention and Conservation - Contact: State Forester 710 North Sixth Street, Milwaukee, Wisconsin 53202
Filmstrip - Our Wonderful Woodlands FS

Audio-Visual: ST 7 ICE-RMC

Film-City Fire Fighters, Coronet
Donald's Fire Survival Plan, Walt Disney
Fire, Gateway
Fire House Day, Film Association
Fire Engines, Tompkins
I'm No Fool With Fire, Walt Disney
Filmstrip - Fun on Wheels
"Johnny the Fireman" 114-1R SVE $11.00
Your Friend the Forest, Save It or Destroy It, color, 6 min. EBF BAVI

Community:

Fire Chief: Explain fire safety and the fire station and its function to the children. Also may demonstrate ways to put a fire out. May have some pamphlets for children to take home.

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

E. Murals: Forest Fires
1. Draw what someone did that started the fire. (matches, campfire, cigarette, etc.)
2. Draw trees burning and wildlife fleeing from their forest homes.
3. Results of the fire: blackened stumps and wildlife desperate to find a new home.

II. Physical Education

A. Game illustrates the plight of the animal searching for a home.
SQUIRRELS AND TREES
1. Players in groups of three with hands clasped together, forming a tree. One squirrel is placed in each tree. One odd squirrel is without a tree.
2. The "it" person is the fox and chases the squirrel. The squirrel reaches safety when he takes a tree and the other squirrel must run. If he is caught, he changes roles with the fox and becomes the catcher.
3. When a new squirrel enters a tree, rotate with a part of the tree; therefore, letting everyone have a chance to run.

B. Rhyme:
Sky is up, (reach up)
Ground is down, (reach down)
Air is everywhere,
All around.

C. Fire in the Forest:
Form double circle. Players in front are trees. "It" stands in the center. He calls, "Fire in the forest, run, run, run". Players run counterclockwise around circle. "It" claps his hands and runs in front of a tree. Other players must run in front of a tree. The player who did not find a tree becomes "It". The trees now become the runners.

E. S. E. A. Title III — PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 6 - Natural Resources

SUBJECT Social Studies

ORIENTATION Why Are There Jungles and Deserts?

TOPIC/UNIT Jungles and Deserts

BEHAVIORAL OBJECTIVES

Cognitive:

Compare deserts and jungles, in terms of:
- amount of rainfall and moisture
- types of plants
- types of animals
- types of soil
- temperatures

Affective:

Propose different climatic environments of the earth as being responsible for different types of animals and plants being found in different areas of the world.

Skills Used:

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Talk about yards in our area. Plants, trees and animals. Our climate has enough rain and sunshine for these plants and animals to survive.

B. Make a picture of a yard. Include plants and animals you would like in your yard.

C. Develop terms:
desert and jungle
Point out characteristics of deserts and jungles -
heat, lack of water and moisture.

D. On map - point out different areas - desert, jungles, where we live--Florida, California, and Alaska. Compare weather in different areas.

E. Have each child tell whether he would like to live in the jungle, desert, or where he lives now. Why?

Outside or Community:

A. Take a class walk to a park or nearby yard. Look for all the green growing things. (Note that green plants are the only living things in the whole world that make their own food). Grass, shrubs, trees and plants make the area more pleasant.

B. Recall all the kinds of animal life observed in their yards, (birds, insects, squirrels, chipmunk, rabbit, bees, earthworms.)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: You and the World Around You Selsam A Crack in the Pavement Ruth Howell A Small Lab Keith The Fresh Water and Man, Benzeger ICE-RMC **Audio-Visual:** Film - Why Plants Grow Where They Do, Coronet, 11 min. BAVI Study Prints - Kit - 38 Desert Pictures ICE-RMC McGraw-Hill Study Prints Animal and Plant Communities **Community:** Where Plants Live Desert Community Forest Community	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

CONCEPT NO. 7 - Changes in Land Use

ORIENTATION How Does Transportation Influence Land Use?

Integrated with:

SUBJECT Social Studies

TOPIC/UNIT Transportation

BEHAVIORAL OBJECTIVES

Cognitive:

Name four types of early transportation.

Name ways land is used in the transporting of persons and goods from one place to another.

Affective:

Object to the idea that we should build more roads, because it will take away land for growing crops.

Skills Used:

1. Discussion
2. Collection
3. Planning

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Discuss forms of transportation
   1. Early transportation. Use pictures:
      a. Walking
      b. Riding on animals
      c. Sleds, ox carts, covered wagons, etc.
      d. Trains
   2. Modern transportation.
      a. How does it affect our lives?
      b. Because of cars, planes, etc., how does it affect land use?
   3. Why do some people move from the city to the country?
      a. To get away from crowded conditions.
      b. Fast transportation enables people to live farther away from their work.
   4. Discuss the different methods of travel across town or to school (walking, car, bicycle, bus).

B. Pose Problems Such As:
   1. If Sue wanted to go some place very quickly, what means of transportation would she use?

(continued)

Outside or Community:

A. Collect Pictures
   1. Children can bring pictures of old methods of travel.

   2. Children can bring pictures of modern transportation.

   3. Pupils bring models or toys of different means of travel. Each child tell how the real thing is (or was) used.

SUGGESTED RESOURCES

Publications:

Audio–Visual:

FS Transportation 220-6 SVE
Films:
Transportation: Footpath to Air Lane, color, 16 min., BAVI Churchill
Children at Work and Play Around the World, B&W, 20 min., BAVI, United World
America, the Beautiful, color, 20 min., BAVI
Fishin' Fun in Wisconsin, color, free from Conservation Div.
The City, color, 11 min., BAVI EBF

Community:

Trip to motel or resort.
Have parents show slides of recent travel.
Trip to town or city to study why larger pop. than rural area.
City park to see facilities, guided by recreation director.
Railroad museum

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

2. If Dick wanted to go some place and see new things as he traveled, what means of transportation would he use?

C. Snowmobiles are a new form of transportation and recreation and necessitates changes in land use. Kids love drawing and painting snowmobiles in their pictures so plan a lesson based on snowmobiles. First discuss the good and bad aspects of snowmobiles.

D. Draw favorite form of transportation.

E. Make a Transportation Bulletin Board. Draw and cut out or construct different kinds of vehicles.

Air			rockets
Land	cars	bikes	train
Water	boats		

F. Read the book, The Little House, by Virginia Burton. Discuss how land use changed.

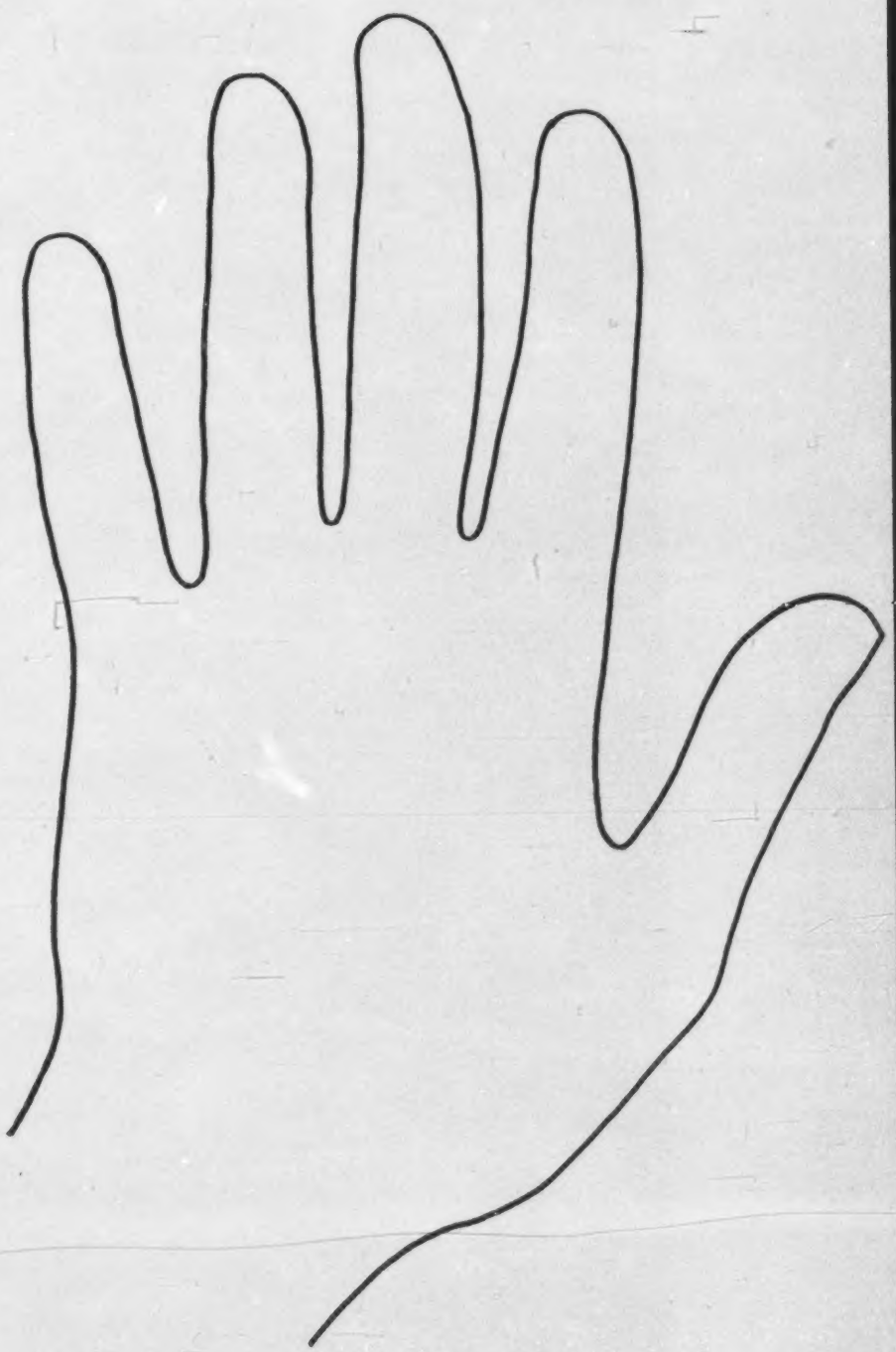
G. Discuss - Why do people have more leisure time now than they did years ago? What makes work easier now?

H. Have children name as many ways as they can that land is used. Teache lists on the board. After the list is made talk about the items. Which of the changes in land use came about as a result of changes in transportation?

BEST COPY AVAILABLE

MY FINGERS

My fingers are antennae
Whatever they touch
Bud, rose, apple
Cellophane, crutch-
They race the feel
Into my brain
Plant it there and
Begin again.
This is how I know
Hot from cold
Before I was even
Two years old.
This is how I can tell
Though years away
That elephant hide
Feels leathery grey.
My brain never loses
A touch I bring.
Frail of an eggshell
Pull of a string
Beat of a pulse
That tells me life
Thumps in a person
But not in a knife.
Signs that say:
"Please do not touch,"
Disappoint me
Very much.



Fingers Are Always
Bringing Me News-
Mary O'Neill

E. S. E. A. Title III — PROJECT I-C-E 59-70-0135-4

Environmental: **Integrated with:**

CONCEPT NO. 8 - Value and Attitudes **SUBJECT** Science

ORIENTATION How Do Our Senses Help Us To Know Our Environment? **TOPIC/UNIT** Using Our Senses

BEHAVIORAL OBJECTIVES

Cognitive:

Describe the child's environment as determined through the use of each of his senses.

Affective:

Demonstrate an appreciation of nature and willingness to preserve it by taking or drawing pictures of trees and flowers instead of picking them when making collections.

Skills Used:

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Read Poem, "Abigail's Fingers" from Fingers Are Always Bringing Me News by Mary O'Neill.

One day Abigail said in surprise:
"My fingers are almost
the same as my eyes.
Fingers are always
Bringing me news
Toes never know
Because of shoes.
They tell me what
Is hot and cold,
And what is too heavy
For me to hold.
They lift my crayons,
Smooth my hair,
And tuck me into
My underwear.
They hang my clothes
On proper hooks,
Put things into and
Out of pocketbooks.
They tell me what
Is soft and hard
And help me write
A postal card.
They know the rough
Of brick and log
And that the softest thing
Is fog."

(continued)

Outside or Community:

A. Go outside - Feel and touch things like stones, grass, bugs, weeds, and bark.

B. Take a trip to a wild spot. Use the "ICE" sensory development field guide "It's YourWorld", complete unit attached.

C. Refer to Bug's-eye view in Concept 2, page 21.

SUGGESTED RESOURCES

Publications:

Using Our Senses — 110 UN
ICE-RMC

Audio-Visual:

Films:
Treasures of the Earth, color, 11 min. BAVI
Let's Take a Walk in the Woods, color, 11 min., BAVI

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (continued)

B. Read books about the senses.

C. Games involving the senses.
Taken from: Learning about Nature through Games by V. Musselman

1. Memory Test

Test the visual memory of the boys and girls. Place ten different objects in a paper bag. Take them out one at a time, hold them up for a few seconds, and replace them in the bag. Then ask each youngster to list the objects he saw in the order in which they were shown. Use simple objects such as a pine cone, acorn, pebble, burr, leaf, flowers, twig, berry, seedpod, etc. - things easy to find locally.
Variation: Use all vegetables. All fruits. All flowers.
Instead of a bag, put the items on a tray. Give each person a quick look, then cover the tray. Then see how many objects they can remember and name.

2. Flight Watch

Go with the youngsters to a quiet place, sit quietly, and watch the flight of birds. Try to see birds that:
soar like gliders flap their wings steadily
fly up and down in short curves make very short flights
fly very high fly very low sing, whistle or make other sounds in flight.
Do birds take off or land against the wind, or with the wind? Can a bird fly backwards? Why don't birds fall off their perches when they're asleep? Look at a pet canary or parakeet and find out.

3. Finger Memory

Blindfold one player. The others move around it until he calls "come closer, friends!" Then they all come close, and try to

(continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	CLASSROOM (continued) C. 3. Finger Memory touch It without being caught. When someone is caught, It must identify him by touching his face and head. If It guesses correctly, that person becomes the New It. (This game is played all over the world, with different names, but with the same excitement of touch identification). 4. Which is more smooth? A window pane or a stuffed chair? A baby's face or its father's face? A gravel walk or a bare waxed floor? A handkerchief or a washcloth? The tread on a tire of a car or the car windows? A ripe tomato or a ripe strawberry? A newspaper or a sheet of sandpaper? New ice on a pond or ice frozen from slush in the street? A board just sawed or this board after sanding? A leather coat or a burlap bag? A turtle or an eel? Your eyebrows or your lips? Woolen mitts or cotton gloves?
Audio–Visual:	
Community:	5. Treasure Walks Take the youngsters on a short walk or hike. Each one searches for his own special treasure - something interesting or beautiful which he would like to remember. No touching, no collecting. He stores it in his mind, not his pocket. At the end of the walk, everyone shares his treasure by telling about it.

IT'S YOUR WORLD

58/59

A sensory development field experience for grades 1-3 based on:

Concept #2 All living systems interact among themselves and their environment forming an intricate unit called an eco-system.

and

Concept #12 All men depend on the proper functioning of Mother Earth. Each person must exercise custodianship of the earth for the benefit of mankind.

THE EARTH HAS MANY KINDS OF PLACES. THERE ARE WILD PLACES, FARM PLACES, AND CITY PLACES.

HAVE YOU EVER GONE TO A WILD PLACE? IF YOU WENT, DID YOU FIND OUT WHAT MADE IT WILD? YOU CAN GO WITH YOUR FRIENDS TO A WILD PLACE NEAR SCHOOL. USE YOUR EARS. USE YOUR NOSE. USE YOUR SKIN. USE YOUR EYES. EVEN USE YOUR TONGUE, CAREFULLY. LET THE WILD PLACE TELL YOU ABOUT ITSELF.

CAN YOU TELL OTHER PEOPLE ABOUT YOUR TRIP TO A WILD PLACE? CAN YOU TELL THEM WHY A WILD PLACE IS GOOD TO KEEP?

Supplies Needed: Blindfolds, portable tape recorder, if available.

Place to Go: Any wild spot which is not regularly used by man.

Student Preparation:

Practice listening - smelling - feeling - seeing things in school which show that it is a city place.

Wear clothes for which your mother won't scold you if you sit on old logs and leaf piles and other good places to be on the field trip.

Things to do: Go outside and find joy in your environment.

Feeling Time:

Sit in the wild place. Place a blindfold on. Then pass around small parts of the wild place one at a time. Feel them with your hand. Your teacher will find these things to pass around. Don't name the thing. Each student may say one thing about the part of the wild place. Listen as each person says what it feels like.

At the end of the feeling time, take the blindfolds off. Everyone may look at the things. What were the best things said about each thing?

Teacher note: Use soil, bark, moss, rotting stump, worms, stones, sow bugs, grass, flowers, and other good things.

Walk a little way in your wild place.

Listening Time:

Sit for 5 minutes in one place. Everyone be still. A blindfold may help you listen better. Listen to the sounds of the wild place. If there is a tape recorder, turn it on so that you can capture the sounds of your wild place to listen to later.

After you have listened, tell what might have made the sounds. Tell what the sounds were like with words.

Walk on a little farther.

Smelling Time:

With blindfolds on, smell the things your teacher finds for you in the wild place. Describe what each thing smells like. After passing everything around, take off the blindfolds and find out what each thing was. (You may be led to smell something which can't move to you).

Your teacher may give you some of these things which are safe to taste. Tell what each tastes like.

Time to walk a little more.

Seeing Time:

Look at the things in your new place. Tell about the things.

The colors of your wild place.

The shapes in your wild place.

The movement in your wild place.

The size of things in your wild place.

The weather today. The clouds. The wind.

Walk a little more.

Thinking Time

Stop and think about this wild place. Ask yourself:

Is it good to be here?

How do you feel about yourself today?

Would you like to come back?

If you were an animal, would you like to be here?

Or, if you were a plant?

What if somebody changed this place?

What if somebody was careless and left junk here?

How would you keep this place good?

Back in School

1. Write a letter to your parents telling about your trip to a wild spot. (or to the principal, the administrator, the mayor, etc.)

2. Make a mural that contains the things you found as parts in your wild place.

3. Use some of the things of the wild place to make a collage.

4. Listen to the sounds of your wild place on tape and draw pictures of the sounds happening.

Teaching this unit

The unit is set up to take advantage of the point that primary level students learn by direct involvement sensory activities. For them, nature study activities should not stress factual details. The minds of primary level students are not yet ready for much sophistication at the factual and conceptual level. These students are not interested in the names of trees, flowers, bugs, or even why and how ecosystems interact.

These children are interested in exploring as many new things in their environment as they are able. They need direction in this exploration because their discriminating abilities need to be trained. They should come to know that there is a great variety in each part of the environment.

Teachers should obtain the services of parents and other volunteers for field use of this exercise. The volunteers should be trained briefly before departure to the field. Each volunteer and the teacher should be assigned no more than 6-8 students.

Each teacher or volunteer will lead her assigned group to an area enough removed from other groups at the field site so that students can concentrate. The leader should use several of the suggested exercises as time permits. Note that the "Thinking Time" exercise is very important and should be completed even if preceding exercises must be left out. Use a whistle to bring in the groups to a final collecting point.

Each child should have a blindfold assigned beforehand. Magic markers may be used for color coding the blindfolds to more easily assemble the different groups at the field site. After the first exercise the use of blindfolds may be discontinued if so desired.

Leaders should emphasize the use of describing words by the students. Ask them to tell not what an object is, but how it feels, smells, looks, etc. Stress aesthetic qualities of the environment in the various activities. See that they find goodness in the natural system. Have fun! The children will.

Resources: Environmental Awareness (develops the students' sensory abilities)
Centron Educational Films
5 filmstrips, 5 records
Project I-C-E KIT #16
For loan use, see address listed on first page.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. 8 - Values and Attitudes **SUBJECT** Social Studies

ORIENTATION Why Should We Want To Save Some Land for Recreation? **TOPIC/UNIT** Recreational Areas

BEHAVIORAL OBJECTIVES

Cognitive:

Describe ways in which the child's family uses land for enjoyment.

Explain the importance of land for enjoyment and recreational use.

Affective:

Argue that some areas of land should be saved for enjoyment rather than all for industry, farming or housing.

Skills Used:

1. To be able to sort out or identify things that are beautiful or ugly.

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Show pictures of people who are enjoying nature. (Picnicking, fishing, camping, boating, golfing, swimming, hiking.) Discuss -
   1. What would happen if we did not take care of these areas?
   2. What would happen if we use this space to build more cities?
   3. Why should we keep these areas as they are?
   4. How ugly your environment is.
   5. How beautiful your environment is.
   6. How it makes you feel.
   7. How time changes your environment.

B. Paint or draw pictures of children having fun, and show where the fun is.

C. Make bulletin board. Divide in half for ugly and beautiful things. Have children bring pictures of junk, rocks, leaves, branches, flowers. Have children decide on which side of bulletin board to put each object.

Outside or Community:

A. Students collect material for bulletin boards from areas around their homes.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	
Audio–Visual: Film - 380 Environmental Enrichment - What You Can Do About It. 21 min., color, ICE A Place To Play Film 540 ICE-RMC	
Community:	

OFF AND AWAY

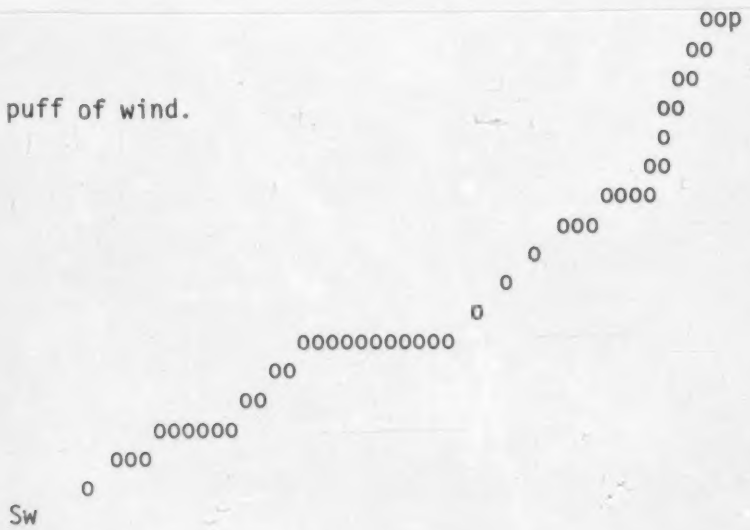
Little piece of paper on the ground.

Going nowhere.

Doing nothing.

Flat.

Little puff of wind.



E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 9 - Management

SUBJECT Science - Physical Education

ORIENTATION How Do We Adjust to Different Weather?

TOPIC/UNIT Seasons

BEHAVIORAL OBJECTIVES

Cognitive:

Using flannel board objects, the child will select the proper clothes for each season.

Includes weather as one of the factors affecting the types of clothing he wears.

Affective:

Argue that weather is the most important factor affecting the type of clothing that a person wears.

Skills Used:

1. Discussion
2. Observation

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

I. Science
   A. Teacher set stage for discussion by pretending it is hot, cold, rainy, etc. outside.
      1. Have child tell what kind of clothes to wear and also tell how they would keep cool or warm and why we need clothes.
      2. Teacher leads a discussion on -What man can do to manage his environment - how does he get ready for winter? How does he change when the weather gets warmer?

   B. Read books about seasons.

   C. Each child will tell from seeing a picture of kinds of weather, what kind of clothes they would wear and how they would keep warm or cool.

   D. Draw a picture of clothes worn in summer and winter.

   E. Draw a picture of your favorite season and tell about it.

Outside or Community:

A. Plan a short walk outside. Each child should be prepared for whatever kind of weather there is. Observe what kind of clothing other people are wearing.

B. Locate one particular scene on the school grounds. Watch this area during each season. Make a chart story about your observation. Take a picture with your camera and mount on the chart story.

SUGGESTED RESOURCES

Publications:

Books from library on seasons and clothing.

Audio–Visual:

Pictures of the seasons
Pictures of different clothing
Films on different seasons
Filmstrips - SVE
Learning About the Seasons
F445 - $22.50
The Seasons 853 $20.00
Seasons Adventures 853 $20.00

Films
Children in Autumn, color, 11 min.
(EBF) BAVI 0282 $4.75
Children in Winter, color, 11 min.
(EBF) BAVI 4347 $4.00

Community:

(continued)

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

I. F. FOUR SEASONS

Springtime is a green time
When seedlings start their growing
Summertime's a rainbow time
When many blooms are blooming
Autumntime's a brown time
When seeds are ripe for sowing
But wintertime's a white time
It is the flowers' night time
When stars of frost are glowing.

THIS I KNOW

Summer, winter, spring or fall
I am happy with them all,
Every morning, noon or night
Each one, has its own delight.
Sun or rain or cloudy day
Time for school or time for play.
Life is happy this I know
Just because I make it so.

SEASONS

Summer, winter, spring, and fall
How we love them, one and all.
Each one brings us lots of fun
Rain and snow and nice warm sun.

II. Physical Education
A. Game: MR. SUN

One player is Mr. Sun. All other players stand in a straight line on one goal. In unison, players call, "Mr. Sun, Mr. Sun, will you chase us when we run?" Mr. Sun replies, "Yes, I will, if

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	CLASSROOM (Continued) II. A. you're wearing "_____" (he calls a color such as red, green, etc.) All players wearing that color run to opposite goal and Mr. Sun tries to tag them. Any player he catches is out of the game. He has three chances, then calls everyone over. AUDIO-VISUAL (Continued) Spring Is An Adventure, color, 10 min. Coronet BAVI 3450 $4.50 Summer Is An Adventure, color, 10 min., Coronet BAVI 4089 $4.00 Animal Predators and the Balance of Nature, color, 11 min. Journal BAVI 4706 $4.00 Game from ICE-RMC S64 Man in His Environment
Audio-Visual:	
Community:	

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental: **Integrated with:**

CONCEPT NO. Concept No. 9 or 11 **SUBJECT** Social Studies - Physical Education

ORIENTATION How Does Littering Affect Nature's Beauty? **TOPIC/UNIT** Litter

BEHAVIORAL OBJECTIVES	STUDENT–CENTERED LEARNING ACTIVITIES	
	In-Class:	Outside or Community:
Cognitive: Collect litter and put in proper containers on his own. Describe how littering changes the environment.	I. Social Studies A. Teacher introduces the lesson by putting on a mask (made before class) from a large paper bag. Walk around the room, scattering litter. Later use the bag to collect litter with the children. 1. Discuss the problem of littering. a. Who litters? b. What litters? List on board. 2. What can we do to keep from becoming litterbugs? 3. How does littering change the environment? 4. How can we improve our environment? B. Make litterbags. Take home to use in the family. C. Have the janitor show children what he does with the waste from the waste baskets. II. Physical Education A. Direct the children to form a circle and join hands for a special game. (Continued)	A. The children use the litterbag they made to take home or make another one. Go out on the school yard and collect litter. Save litter and make a big litterbug to display in the hall. B. Select 2 areas on the school yard - 1 nice place, free of litter, a tree, etc. 1 littered, bare, etc. Sit in the place - Think about it. Ask questions like: Is it good to be here? How do you feel about yourself today? Would you like to come back? If you were an animal, would you like to be here? Or, if you were a plant? What if somebody changed this place? How would you keep this place good?
Affective:		
Skills Used:		

70/71

SUGGESTED RESOURCES

Publications:

Free Material:
Caterpillar Tractor Company
Dept. AB2C
100 N. E. Adams Street
Peoria, Illinois

Standard Oil Company of California
Public Relations Department
225 Bush Street
San Francisco, California

Audio-Visual:

Films -
Junk Dump - ICE-RMC
Lassies Litter Bit, color, 28 min.
Litterbug, Avis Films P. O. Box 643
Burbank, California

Books
Dear Garbage Man by Gene Zron
Harper & Brothers Publishing, New York

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

II. A.
Teach them the chorus of the song: Rig-a-Jig, to the tune of Buffalo Gals. Have the children skip around in a circle while you sing the words: A rig-a-jig, jig, and away we go, away we go, away we go. A rig-a-jig and away we go, Hi ho, Hi ho, Hi ho, Ask the children to show by their actions, how they feel about each thing you sing about. Teacher sing the verses while the children dramatize.

B. Alternate Class Activity.
Verses for song, "Rig-a-Jig"

1. As I went walking down the street, down the street, down the street,
   A beautiful flower I did see - Hi-ho, Hi-ho, Hi-ho
2. As I went walking down the street....An ugly old tin can I did see - Hi-ho, Hi-ho, Hi-ho
3. As I went walking...A pretty green fir tree I did see - Hi-ho, Hi-ho, Hi-ho
4. As I went walking...An ugly old tree stump I did see - Hi-ho, Hi-ho, Hi-ho
5. As I went walking... Some clean sparkling water I did see - Hi-ho, Hi-ho, Hi-ho
6. As I went walking... A polluted river I did see - Hi-ho, Hi-ho, Hi-ho.

This could be varied by having one child hold a picture or object of each thing.

C. Poem from MISCELLANEOUS - ICE

The earth is a great big ball.
(Make a huge circle)
It isn't flat at all.
(Hold palms flat together)
It spins round and round just like a top.
(Spinning motion with forefinger)
I'm sure it will never stop.

"SAHRA CYNTHIA SYLVIA STOUT" by Shel Silverstein

Oh, Sahra, Cynthia Sylvia Stout
Would not take the garbage out,
She'd wash the dishes and scrub the pans
Cook the yams and spice the hams,
And though her parents would scream and shout,
She simply would not take the garbage out.

And so it piled up to the ceiling:
Coffee ground, potato peelings,
Brown bananas and rotten peas,
Chunks of sour cottage cheese.
It filled the can, it covered the floor,
It cracked the windows and blocked the door,
With bacon rinds and chicken bones,
Drippy ends of ice cream cones,
Prune pits, peach pits, orange peel,
Gloppy glumps of cold oatmeal,
Pizza crusts and withered greens,
Soggy beans, and tangerines,
Crusts of black-burned buttered toast,
Grisly bits of beefy roast.
The garbage rolled on down the halls,
It raised the roof, it broke the walls,
I mean, greasy napkins, cookie crumbs,
Blobs of gooey bubble gum,
Cellophane from old bologna,
Rubbery, blubbery macaroni,
Peanut butter, cake and dry
Curdled milk, and crusts of pie,
Rotting melons, dried-up mustard,
Eggshells mixed with lemon custard,
Cold French fries and rancid meat,
Yellowed lumps of Cream of Wheat.

At last the garbage reached so high
That finally it touched the sky,
And none of her friends would come to play,
And all the neighbors moved away;
And finally, Sahra Cynthia Stout
Said, "Okay, I'll take the garbage out!"

But then, of course, it was too late,
The garbage reached across the state,
From New York to the Golden Gate;
And there in the garbage she did hate
Poor Sahra met an awful fate
That I cannot right now relate
Because the hour is much too late
But children, remember Sahra Stout,
And always take the garbage out.

74/75

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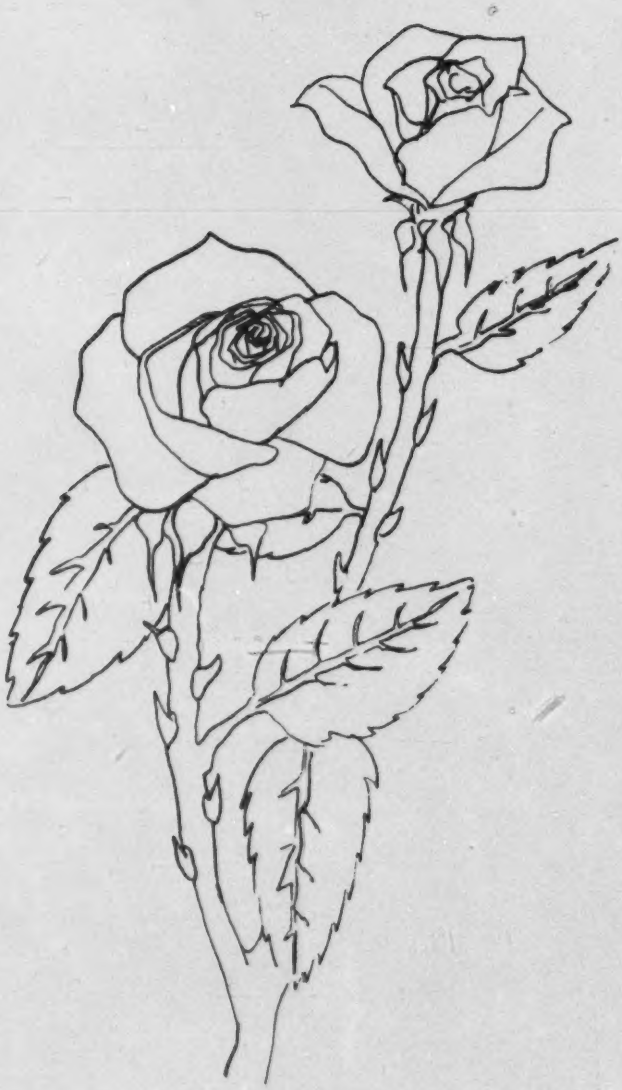

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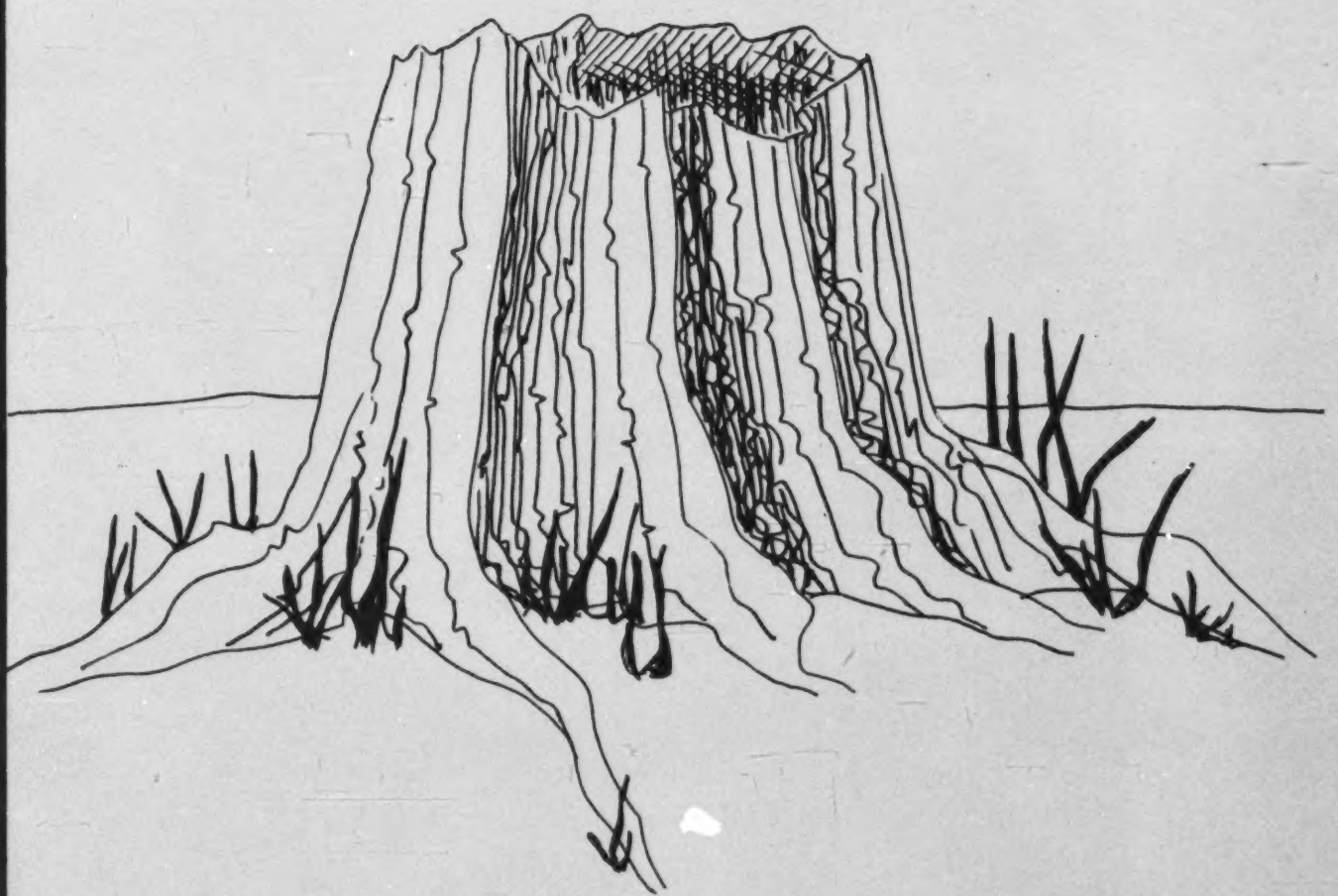

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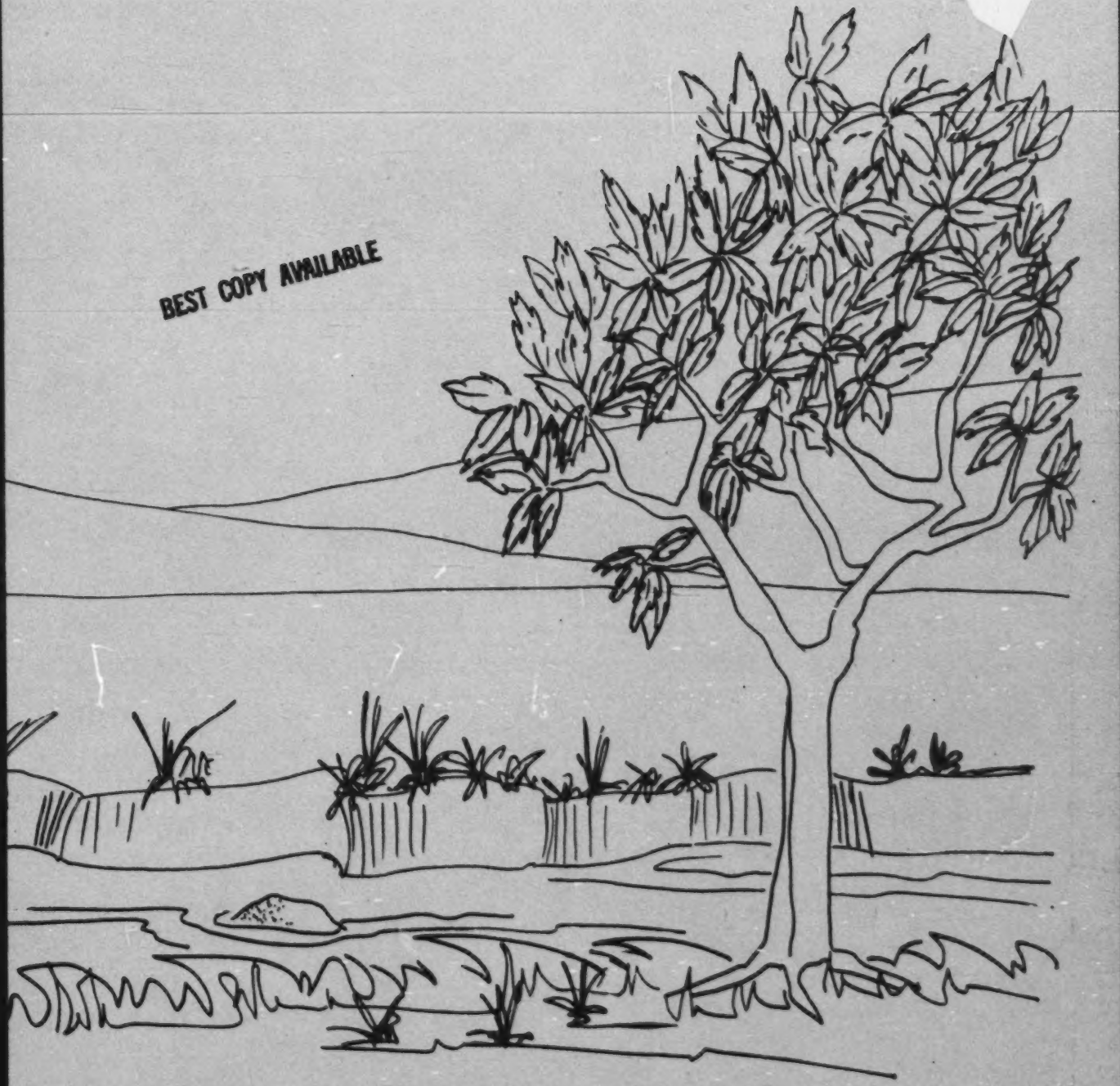

82/83

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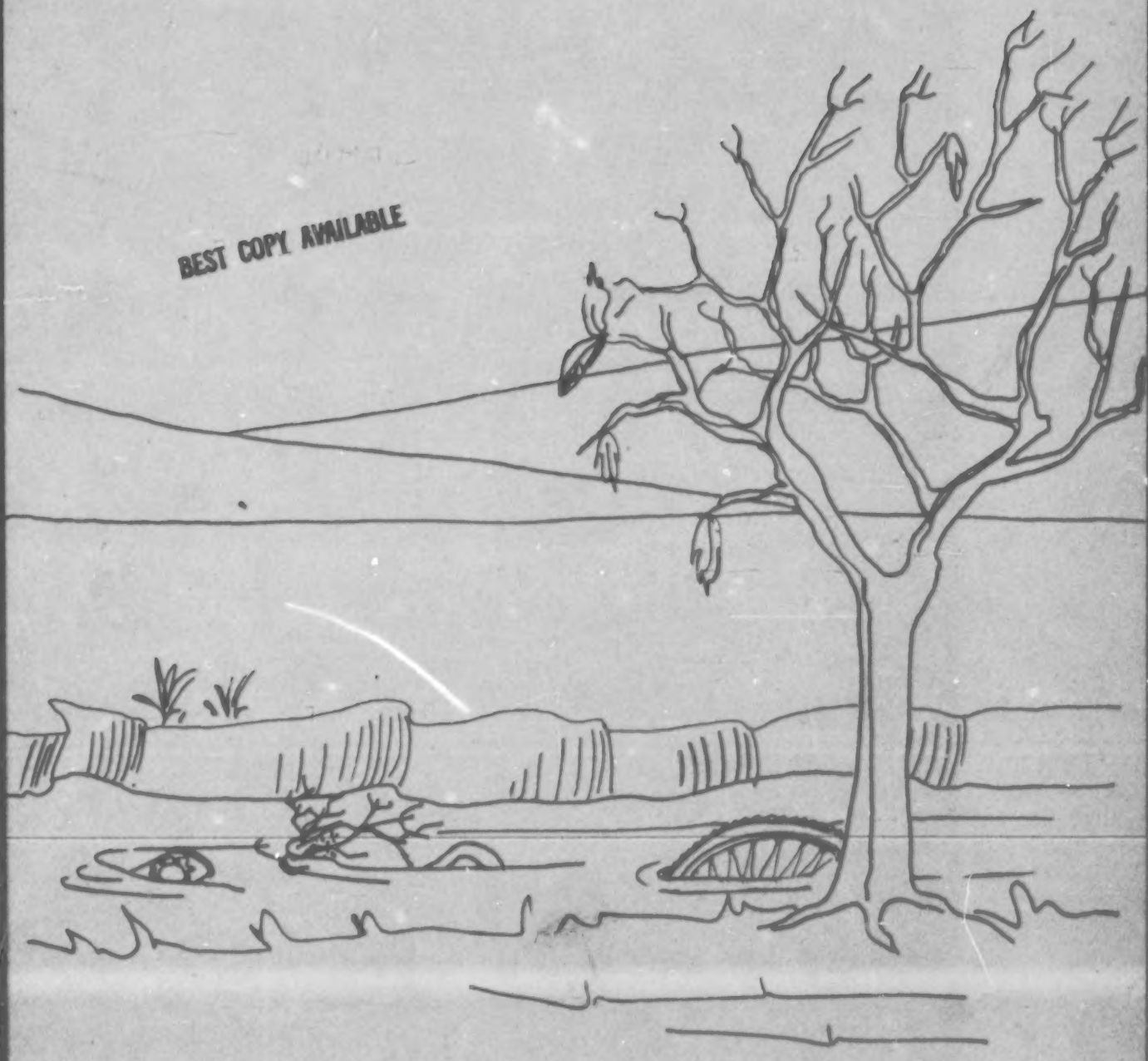
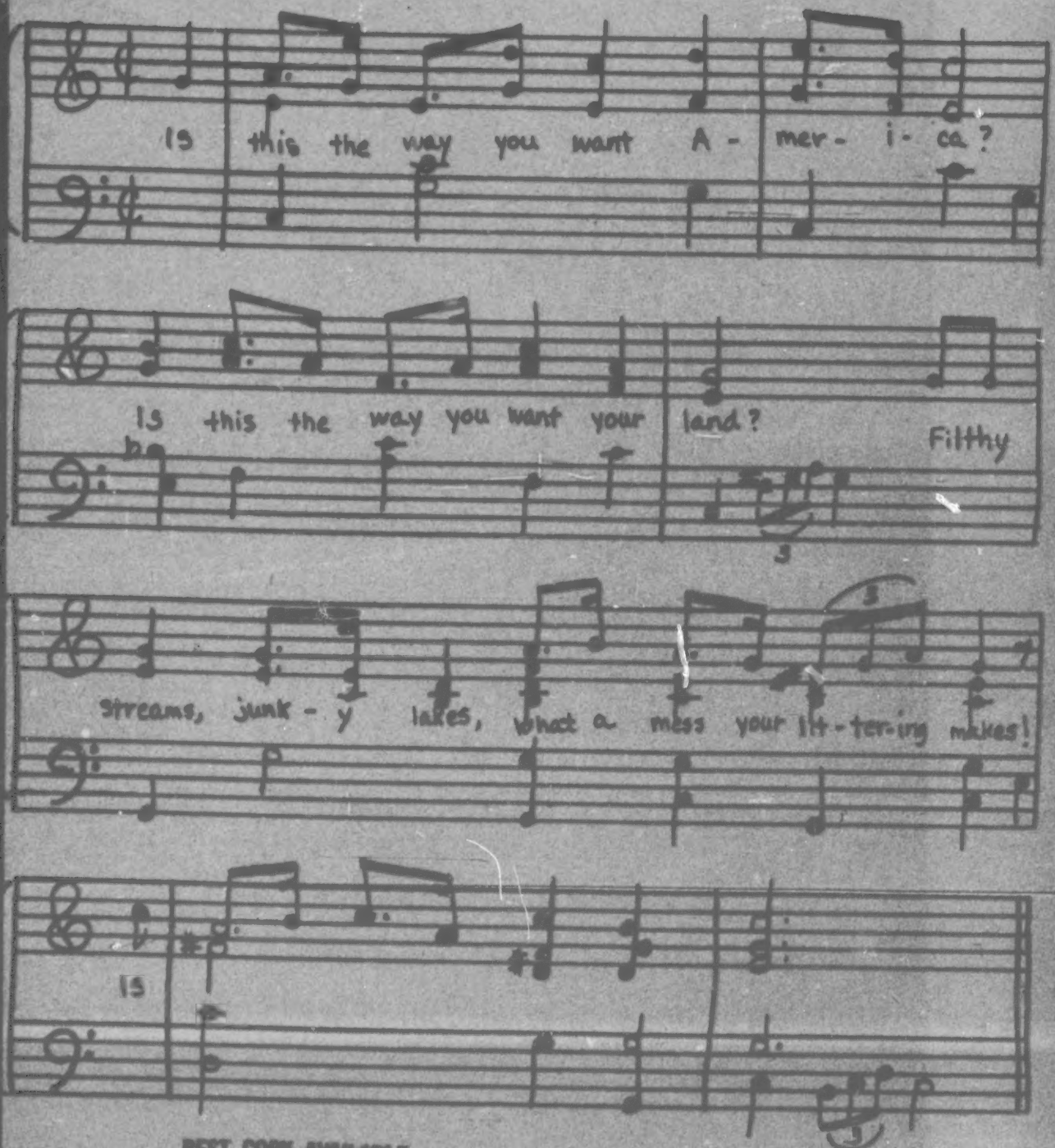


84/85

Is this the way?

Words and music by Marian Hunter

Is this the way you want A - mer - i - ca?
Is this the way you want your land?
Filthy
streams, junk - y lakes, what a mess your lit - ter-ing makes!
Is

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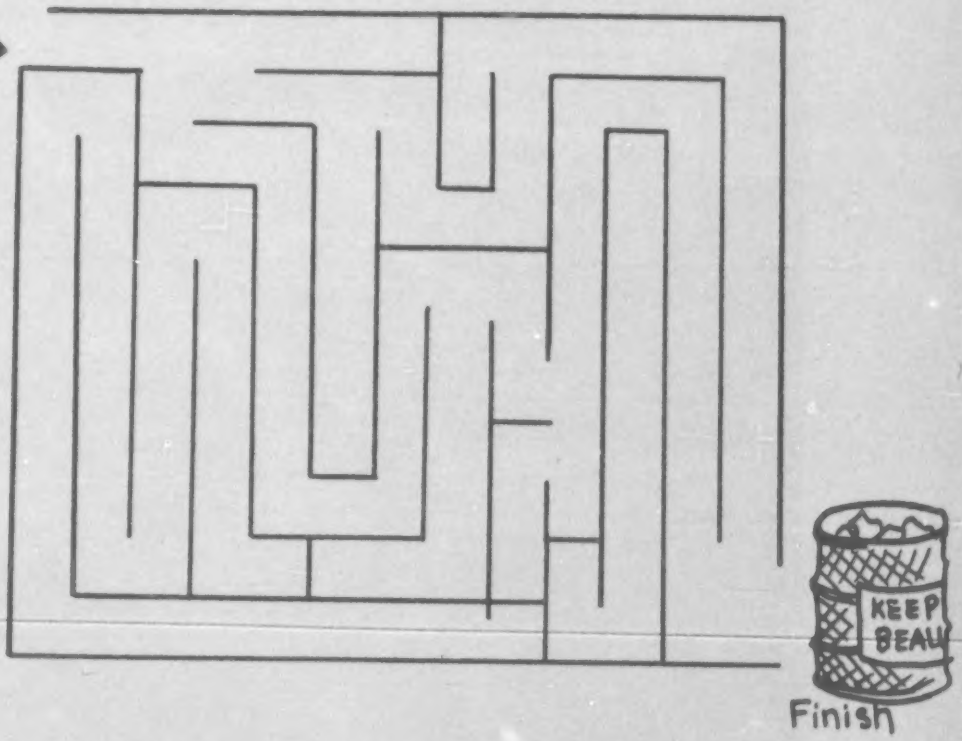
86/87

Draw a line to help the bear find the trash basket.



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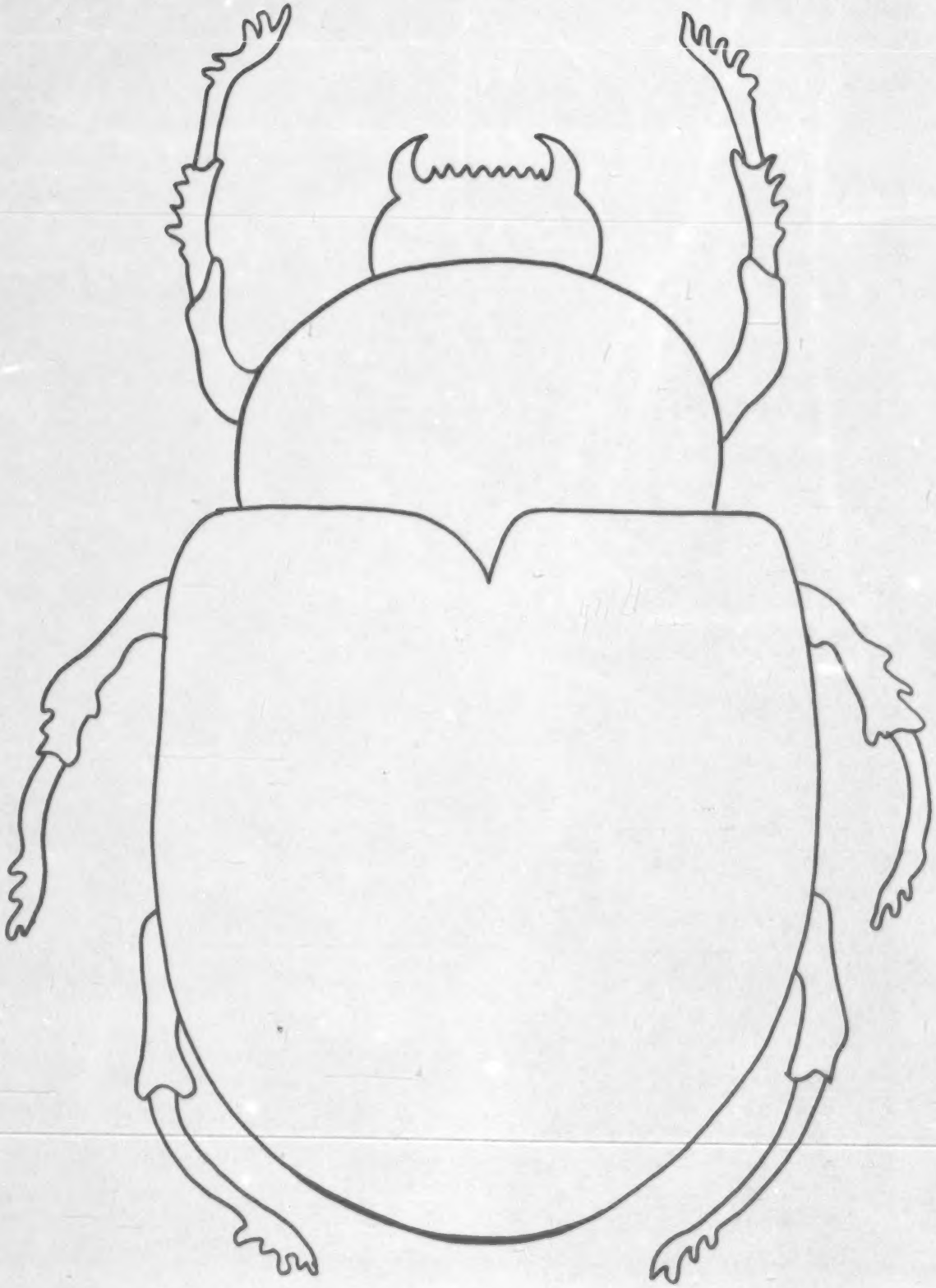
88/89



Enlarge and use for a litterbug bulletin board

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E. S. E. A. Title III – PROJECT I-C-E 59-70-0135-4

Environmental: **Integrated with:**

CONCEPT NO. 10 - Economic Planning **SUBJECT** Science

ORIENTATION What Happens When Things of Nature Are Destroyed? **TOPIC/UNIT** Destroyimg Nature

BEHAVIORAL OBJECTIVES

Cognitive:

Explain what happens when a wildlife area is disturbed. (Trees, flowers, and animals' homes are destroyed).

Affective:

Promote the need for care in road building and camping through the use of drawing posters.

Skills Used:

1. Dismantling of bulletin board destroys attractiveness.
2. Listing

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Pick a Pretty Flower" bulletin board to show how many things can be destroyed. First admire the flowers. Then tell each child to go and pick one. Soon there's a few left. This same thing happens when things of nature are destroyed. They are no longer there for everyone to enjoy.

B. Discuss pictures of machines man uses to make changes. Discuss how each machine changes things.
   1. Farm machinery
   2. Construction machinery

C. The film from ICE Cry of the Marsh is good for discussion.
   1. What if you lived in the area?
   2. What if a turtle lived in the area? How would he feel?

Fingerplay

(Continued)

Outside or Community:

A. Visit highway under construction and watch man's machinery. How will the highway help the community? Does it harm a natural area for wildlife and plants?

SUGGESTED RESOURCES

Publications:

Books:
The Little House, Virginia Lee Bates, Houghton Mifflin, 1970
Miguel's Mountain, Bill Binzen, Coward-McCann

Audio-Visual:

Film: Dairy Farm, 2nd ed., color, 14 min., Coronet, BAVI
Film from ICE: 390 Cry of the Marsh, 12 min., color
FS Famous Elf Books, Tubby Turtle
A 124 SVE

Community:

Farmer
Agriculture teacher
Housing development area
Factory
Highway construction

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

C. 2
a. MY TURTLE

This is my turtle.
(Make fist, extend thumb)
He lives in a shell.
(Hide thumb in fist)
He likes his home very well.
He pokes his head out when he wants to eat.
(Extend thumb)
And pulls it back in when he wants to sleep.
(Hide thumb in fist)

Environmental:

Integrated with:

CONCEPT NO. 11 - Individual Acts

SUBJECT Language Arts

ORIENTATION _____

TOPIC/UNIT Conservation of Resources

BEHAVIORAL OBJECTIVES

Cognitive:

Describe safety precautions to be used by campers and hikers for:

a. Safety of the person
b. Safety of the environment

Affective:

Participate in an imaginary hiking experience which stresses safety and conservation as they mimic hiking movements.

Skills Used:

1. Outdoor living
2. Locomotor skills
3. Creative dramatics

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Stressing safety and conservation, the teacher can lead the children to imagine themselves going on a hike to enjoy nature. Then she can direct them in this problem:
   1. Let's pretend that we are going on a hike. What are some things we need to take with us?
   2. Now that we have gathered all our materials, let's roll our packs into a nice neat bundle in this manner:
      a. Put down your tarp.
      b. Arrange your blankets.
      c. Put the rest of your things in.
      d. Roll the pack and tie it up.
   3. Off we go...(Imitate walking through the woods, each child in his own way, over a rock, jump a creek, etc.)
   4. Time to rest - be careful where you sit.
   5. Let's go again (watch your step).

(Continued)

Outside or Community:

A. Have a boy scout or scout master speak on safety in the woods.
   1. Safety for the camper or hiker.
   2. Safety for the natural environment - how to preserve it and respect for private property.

B. Have a forest ranger speak about fire safety.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Dauer, Victor, Fitness for Elementary School Children Through Physical Education,
Burgess Pub. Co., 1962, p. 105
Webelos Scout Book, Boy Scouts of America

Dinosaurs and All That Rubbish,
Michael Foreman
Thomas Y. Crowell Co., New York

The Loudest Noise in the World
Benjamin Elkin, E. M. Hale & Co.

Audio-Visual:

Community:

Forest Ranger

CLASSROOM (Continued)

A. 6. Make blazes so we can find our way back.
7. Pick a good spot for the tent and put the tent up.
8. Let's go find some firewood for a campfire. Will we chop down a tree? Why not? Why do we put stones around it? Put out campfire.
9. Clear out a spot for the fire, carry stones to put around it, light the fire, cook your supper on it.
10. Eat your supper, be careful how you dispose of wastes, so wild animals don't come too close.
11. Watch where you walk, be careful not to step on small plants.
Etc.

Follow with a discussion of how each one must pick up and care for the area.

a. While hiking
b. While camping

B. Read the book "Dinosaurs and All That Rubbish"
Discuss the fact that the earth belongs to everyone to be enjoyed and cared for.

E. S. E. A. Title III - PROJECT I-C-E 59-70-0135-4

Environmental:

Integrated with:

CONCEPT NO. 11 - Individual Acts

SUBJECT Social Studies

ORIENTATION Why Should We Take Good Care of Things That Belong to Us and Others?

TOPIC/UNIT Respect for Property

BEHAVIORAL OBJECTIVES

Cognitive:

Explain the importance of taking care of personal and school property, including results if the property isn't cared for properly.

Affective:

Show respect for personal and public property by assisting in taking care of the property.

Make suggestions of ways that he could assist in the care of public property, such as parks, to preserve its beauty for others to enjoy.

Skills Used:

1. Discussion
2. Demonstration

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Have the children tell about times when school property should have had better care.
B. Discuss with children the care of their desks and books.
C. Discuss care of their clothes and toys.
D. Discuss why we should take care of public grounds and property.

   1. Who should take care of this property?

   2. What would happen if no one took care of it?

Outside or Community:

A. Tour the school. Look for things that should have had better care. Tell what you could do to make it better.

B. Walk around the school yard. Think what would happen if no one cared for this area. How can you help keep it looking nice?

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	
Audio–Visual: Filmstrip Getting Along in School Series: Taking Care of Things, Coronet Films	
Community:	

E. S. E. A. Title III — PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 11 - Individual Acts

SUBJECT Physical Education

ORIENTATION

TOPIC/UNIT Jump-Rope Ditties

BEHAVIORAL OBJECTIVES

Cognitive:

Pronounce, spell and define, in his own words and examples, the following:

a. Ecology
b. Pollution

Affective:

Skills Used:

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Rope Jumping:
Individual jumps
Snakes--one long rope wiggled horizontally along the floor.
Under the bridge--running under it
Cut the bread--raise straight up and down
Cradles--back and forth not over
Waves--one end held high to make ripple and jump over (Ripple vertical)
Peppers--means jumping at double speed.

Ditties
Jump rope or marching:
Song: Marching to Pretoria
I'm with you and you're with me
And so we are all together
So we are all together...

I'm with you and you're with me
And so we are all together
As we march along.

(Continued)

Outside or Community:

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Audio–Visual:

Ecology Folk Songs, Grades 4-H.S.
Album K 9000 - 1 -12" 33 1/3 rpm
Record, guide (Cassette, $6.95)

Honor Your Partner Albums
Rope Skipping, Ball Bouncing
Vocational Activities, Inc.
Freeport, New York

Community:

CLASSROOM (Continued)

Ditties
We are marching for Ecology, Ecology, Ecology
We are marching for Ecology, Ecology, Hurrah!

P-O-L-L-U-T-I-O-N (Tune of Mary Had a Little Lamb)
Pollution is a dirty word, dirty word, dirty word,
But it's not hard to spell;
Just practice with the syllables, etc.
Until you know it well.
Pol - lu - and then t i o n.
Pollution, pollution --
Let's spell it once again.
P - O - L - L - U - T - I - O - N

E-C-O-L-O-G-Y
E - C - O - L - O - G - Y
You can spell it if you try.
You can understand it, too,
And then you'll make it work for you.

It isn't luck, it isn't fate -
It's just that all things must relate.
Weather, wildlife, water, woods -
When they balance, life is good.

I see paper, I see trash,
I see someone's foolishness.

Fire, Fire, Fire alarm
A spark fell into a farmer's yard,
How many animals did it harm?

Campfire, campfire, burn so bright
Campfire, campfire, gives us light
Campfire, campfire, what a beautiful night
Holy smoke! The campfire got away tonight
How many trees did it burn down?

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications: **Audio–Visual:** **Community:**	CLASSROOM (Continued) Papers, bottles, tires and cans Tell me pollution is caused by man. Fight, fight, fight, fight, Pollution. JUMP ROPE (Individual Rope Skills) 1. Turn rope forward a. Jump on toes of both feet b. Jump on right foot c. Jump on left foot d. Jump first on right foot, then on left e. Progress forward in a run f. Progress forward in a skip g. On the odd count, ordinary jump; on the even count cross hands in front of body making a loop through which the child jumps h. Hold one leg high, knee straight, toes pointed, jump on other foot i. Same as 1-h but throw raised leg forward on one jump and backward on the next j. Jump with feet spread sideward k. Jump with feet spread sideward and backward l. Rocker, leap forward on one foot, leap backward onto other foot. m. Double jump forward-two jumps to each turn of the rope. n. Jump and land with the feet crossed, alternating the position of feet on each jump o. Click heels together while in air p. Turn rope twice while in air q. Move sideward right or left on each jump 2. Turn rope backward doing the above. 3. Click handles of rope together or clap hands each time rope is jumped. 4. Cradling-swing the rope forward under the feet. 5. Grasp both ends of rope in one hand, assume deep knee-bend position, and swing rope in a circular path near ground or floor and jump the rope.

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
Publications:	CLASSROOM (Continued) 5. a. Jump with both feet b. Jump with right or left foot c. Jump, alternating hands, or direction 6. To change direction of rope or to permit jumper to make a different type of jump, use the slip-student swings rope to one side maintaining same jumping rhythm. Individual Rope--Partners Jumping 1. No. 1 turns rope forward, No. 2 runs in, faces his partner, and both jump. 2. Same as one but done backwards. 3. No. 1 turns rope forward, No. 2 runs in, turns his back to partner. 4. No. 1 turns rope forward, No. 2 runs in behind partner. 5. Partners stand side by side, inside hands joined, outside hands turning the ropes. 6. No. 1 turns rope forward, No. 2 runs in faces No. 1 and executes quarter, half and full turns on each jump.
Audio-Visual:	
Community:	

E. S. E. A. Title III - PROJECT I-C-E 59-70-0135-4

Environmental: **Integrated with:**

CONCEPT NO. 12 - Stewardship **SUBJECT** Social Studies

ORIENTATION What things can we do to make our land pretty? **TOPIC/UNIT** Respecting the Rights of Others

BEHAVIORAL OBJECTIVES

Cognitive:

State that negligence in caring for resources results in damage and destruction to those resources.

List ways to beautify the land around them.

Affective:

Show his regard for rights of others by his courteous behavior toward others in the classroom.

Indicate pride in doing his share in keeping the land clean and litter-free by trying to have his area the cleanest area.

Skills Used:

1. Drawing conclusions

STUDENT-CENTERED LEARNING ACTIVITIES

In-Class:

A. Show pictures of a shabby farm or house or factory. Ask children how they would improve its appearance.

B. Discuss reasons for a sidewalk. If everyone walks on grass, grass will die, and a path will be worn.

C. To tune of the Mulberry Bush, Chorus:

1. Here we go round a beautiful tree,
   a beautiful tree,
   a beautiful tree,
   Here we go round a beautiful tree,
   So early in the morning.

   This is the way we...
   a. pick up twigs (3x)
   b. rake the lawn (3x)
   c. cut the grass (3x)
   d. water the plants (3x)
   e. trim the hedge (3x)
   ... so early in the morning.

(Continued)

Outside or Community:

A. Take a walk to look for "eyesores".
   1. Look at junk yard - so displeasing to the eye. What can be done? (Dismantle and recycle glass and metal). A junk yard is not really pollution, but is displeasing to the eye, thus the owner should screen it from view by a tall fence, use trees as a visual shield.
   2. Show factory smoke stacks polluting air and dumping waste products into water. (Results: dirty air making it difficult to breathe; discolored water, plants and fish die; algae on top of water. nobody can swim or fish or boat in it. Beauty is destroyed.)
   3. Litterbugging makes picnic area, home, school, etc. look displeasing to the eye. Conduct litterbug clean-up walks.

B. Visit a farm. Show cow path in field. Talk about how the path was made. Could you and your friends make a path? What would happen if all of us walked across a lawn every day?

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Horton Hears a Who!
Dr. Seuss

Audio–Visual:

Teacher should take own slides.
- shabby farms or houses
- attractive homes
- factories at work
- junk yards
- incinerators
- picnic areas
- paths worn by walking

Community:

Take slides of community:
- junk yard
- dump area

CLASSROOM (Continued)

2. Discussion
   a. Cleaning up can be fun as well as profitable.

D. Variation of Musical Chairs

1. Start with same number of chairs as students. Teacher may label 2 or 3 chairs with signs as: No Fishing, Private Property, No Trespassing, No Dumping, Do Not Tease Dog, etc. Teacher may switch signs or students may wish to suggest signs.
2. Students will walk, skip, jump or a variation of steps, around the chairs. When music stops, students who sit on labeled chairs are out of game.
3. Discussion should follow from motivation of the above activity. Stress respect for private property.

E. S. E. A. Title III – PROJECT I–C–E 59–70–0135–4

Environmental:

Integrated with:

CONCEPT NO. 12 - Stewardship

SUBJECT Social Studies

ORIENTATION What Happens if Everyone Makes As Much Noise As He Wants?

TOPIC/UNIT Respecting the Rights of Others

BEHAVIORAL OBJECTIVES

Cognitive:

Define manners.
Explain why it is not fun to be with some people. Include manners and attitudes.

Identify manners or lack of manners that indicate why a child is included, or excluded, in the activities on the playground.

Affective:

Reject the rights of an individual if his actions are disturbing the rights of others.

Participate in a discussion on the value of good manners to a child.

Skills Used:

1. Following directions
2. Listening
3. Discussion

STUDENT–CENTERED LEARNING ACTIVITIES

In-Class:

A. Talk about good manners.
   1. at home
   2. at school
   3. at play

B. Read parts of Manners Can Be Fun
   1. Discuss reasons why it is not fun to work or play with some people.

C. Use rhythm instruments to show what happens if many people play their own melody at the same time.

D. Teacher will pass out instruments as needed to the class.
   1. Instruct one student to play something very simple.
   2. Instruct others to add in, playing their own pattern, as the teacher directs one by one.
   3. Instruct a majority of the class to raise their hands as soon as the 1st and original player's music is wiped out.
   4. Discussion:
      a. Why couldn't we hear "George" playing his melody any longer?
      b. What does this mean to us when we play our instruments in a class?

(cont'd.)

Outside or Community:

SUGGESTED RESOURCES

Publications:

Books from library on manners.
Manners for Moppets, Betty Betz, Grosset and Dunlap, 1962
What Do You Do Dear? Sesyle Joslin Young Scott, 1961
Manners Can Be Fun, Munro Leaf, Stokes, 1937

Audio--Visual:

16 mm Film - Noise Presentation
free from:
Modern Talking Picture Service
160 East Grand Avenue
Chicago, Illinois 60611

Record - Sounds I Can Hear, Scott, Foresman

Community:

CONTINUED OR ADDED LEARNING ACTIVITIES

CLASSROOM (Continued)

D. 5. Divide the class in half. Half of the group taps on a surface. You can reduce the number tapping. Discuss what happens to the sound as fewer persons tap.

Then add more tappers from the non-participating half. Discuss what happens to the volume of sound.

E. POEM:

Rat-a-tat-tat

Rat-a-tat-tat!
What bird is that?
Rat-a-tat-tat!
It woke up the cat!

It pecks and pecks
And pecks all day.
I wish that bird
Would fly away.

F. Discuss the effects of noise in the school.
How do you feel when there is a lot of noise?
Is it right for you to be as noisy as you want?

I-C-E Resource Center

The following films, filmstrips and kits may be used as a general resource for any Ecology units or episodes - or as an introduction or conclusion to a problem. Although some of these are listed for higher grades, kindergarten children will benefit from them.

FILMS

#380- Environmental Enrichment - What You Can Do About It 21 min. - color - grades K-8.

#390 Cry of the Marsh - 12 min. - color - grades K-12.

#400 Boomsville - 10 min. - color - grades 2-12 Animated

#220 A World Is Born - Walt Disney - 20 min. - color - Grds. K-8.

*#310 Junkdump - ACI Films - 20 min. - color - grades 5-12

#320 The Steam - ACI Films - 15 min. - color - grades 5-12

#330 A Slice of Bread - Sterling Educational Films - 16 min. - color - grades 2-8.

#210 Nature's Half Acre - Walt Disney Educational Materials, 33 min. - color - grades 1-8.

FILMSTRIPS

St 5 Animal World Series - McGraw-Hill Text - Films - 8 color filmstrips - grades K-4.

St 7 Our Wonderful Woodlands - American Forest Institute - filmstrip, cassette, 20 comic booklets - grades K-4.

St 8 Animals of the Forest Series - McGraw-Hill Text - Films - 5 filmstrips - grades K-3.

St 12 Man and His Earth - 8 filmstrips 8 guides, 1 master guide, student activity sheets - grades Sp. Ed. - Primary

KITS

Kit 10 Environmental Action - No Time to Waste - Continental Can Co. - filmstrip - record - card game - teachers' manual - student handbook - grades K-6.

Kit 16 Environmental Awareness - Centron Educational Films - 5 filmstrips and 5 records - grades K-6.

*260 Garbage - King Screen Productions - 10 min. - color, grades 4-12.

KITS (continued)

Kit 19 Introducing Animals Series - Mc-Graw-Hill Study Prints - 5 sets of color posters - grades K-6

Kit 21 Eco-Lab: A Study of Rural & Urban Ecology - Benefic Press - 208 Activity Cards - Grades K-6.

Kit 35 Save the Earth - A Nature Conservation Kit - 2 filmstrips - 1 record - teachers' manual - student handbooks and grades K-2.

Kit 37 The Variety-of Living Things - 6 sets of study prints - grades K-6

Kit 38 Animal and Plant Communities - 5 sets of study prints - grades K-6.

Kit 40 Environmental Education Activity Cards - (air-water-land-life) 288 activity cards - 1 pamphlet - grades K-12.

Kit 42 The Only World We Have (air-water-energy supply - population-living and green-space-natural resources and food) 6 cassettes - spirit masters - teachers' guide - grades K-6.